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March 3, 1849

1879 · CENTENNIAL · 1979

Water Resources Data for Pennsylvania

Volume 1. Delaware River Basin

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-78-1

WATER YEAR 1978

Prepared in cooperation with the Pennsylvania
Department of Environmental Resources,
the Philadelphia Water Department and with other
State, municipal, and Federal agencies

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CALENDAR FOR WATER YEAR 1978

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Water resources data for the 1978 water year for Pennsylvania consist of records of discharge, and water quality of streams; contents, of lakes and reservoirs; and water levels of ground-water wells. This volume contains records for water discharge at 83 gaging stations; contents at 10 lakes and reservoirs; water quality at 59 gaging stations and water levels at 16 observation wells. Also included are data for 43 crest-stage, 35 low-flow, and 44 water-quality partial-record stations. Locations of these sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data together with the data in Volume 2 and 3 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Pennsylvania.

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Water Resources Data for Pennsylvania

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WATER YEAR 1978

Prepared in cooperation with the Pennsylvania
Department of Environmental Resources,
the Philadelphia Water Department and with other
State, municipal, and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. W. Menard, Director

For additional information write to
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U.S. Geological Survey
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Harrisburg, Pennsylvania 17108

1979

PREFACE

This report was prepared by personnel of the Pennsylvania District of the Water Resources Division of the U.S. Geological Survey under the supervision of D. C. Perkins, Acting District Chief, and J. E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the State of Pennsylvania and with other agencies.

This report is one of a series issued State by State. General direction for the series is by O. Milton Hackett, Acting Chief Hydrologist, U.S. Geological Survey, and Philip Cohen, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Pennsylvania are in three volumes as follows:

Volume 1. Delaware River Basin
Volume 2. Susquehanna and Potomac River Basins
Volume 3. Ohio River and St. Lawrence River Basins

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GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

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WATER RESOURCES DATA FOR PENNSYLVANIA, 1978

INTRODUCTION

Water resources data for the 1978 water year for Pennsylvania consist of records of discharge, and water quality of streams; contents, of lakes and reservoirs; and water levels of ground-water wells. This volume contains records for water discharge at 83 gaging stations; contents at 10 lakes and reservoirs; water quality at 59 gaging stations; and water levels at 16 observation wells. Also included are data for 43 crest-stage, 35 low-flow, and 44 water-quality partial-record stations. Locations of these sites are shown on figures 5, 6, 7, and 8. Additional water data were collected at various sites not involved in the systematic data-collection programs and are published as miscellaneous measurements and analyses. These data together with the data in Volumes 2 and 3 represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Pennsylvania.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-78-1". For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche by the National Technical Information Service. U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (717) 782-3420.

COOPERATION

The U.S. Geological Survey and organizations of the Commonwealth of Pennsylvania have had cooperative agreements for the systematic collection of surface-water records during the periods 1919-21 and 1931 to date, water-quality records from 1944 to date, and ground-water records from 1925 to date. Organizations that supplied data through cooperative agreement with the Survey are:

State Department of Environmental Resources, Clifford L. Jones, secretary, through the following: Office of Resources Management, C. H. McConnell, deputy secretary; Office of Environmental Protection and regulation, W. B. Middendorf, deputy secretary; Bureau of Topographic and Geologic Survey, A. A. Socolow, Director.

State Department of Transportation, Thomas Larsen, secretary, through the Bureau of Materials Testing and Research, L. D. Sandvig, director.

Delaware River Basin Commission, G. M. Hansler, executive director.

Chester County Water Resources Authority, D. C. Yaeck, executive director.

Delaware Valley Regional Planning Commission, W. N. Johnson, executive director.

City of Easton, H. J. Schultz, mayor.

City of Bethlehem, P. Marcincin, mayor.

City of Philadelphia, Water Department, C. F. Guarino, water commissioner.

Delaware Geological Survey, R. R. Jordan, state geologist.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in providing records for 48 gaging stations published in this report. Assistance was also furnished by the National Weather Service, NOAA, U.S. Department of Commerce, and the U.S. Environmental Protection Agency.

The following organizations aided in collecting records:

Palmer Water Co.; Pennsylvania Power and Light Co.; Philadelphia Electric Co.; Philadelphia Surburban Water Co.; New Jersey Zinc Co.; Panther Valley Water Co.; and the City of Coatesville.

HYDROLOGIC CONDITIONS

Streamflow during the 1978 water year was well above average across the basin. At the two representative gaging stations for the Delaware River basin, Bush Kill at Shoemakers, PA (01439500) and Schuylkill River at Pottstown, PA (01472000), streamflow was 154 percent and 170 percent, respectively, of the 1941-70 median.

Precipitation for the year was above normal at all index stations. Monthly values showed a wide range in precipitation, but were fairly consistent across the basin. All index stations showed October, November, December, January, May, and August precipitation to be above normal, with January values averaging 273 percent of normal. Conversely, monthly values for all index stations were less than normal for February, April, and September, with February values averaging 54 percent of normal and April values averaging 48 percent of normal. March, June, and July values varied from above normal to below normal across the basin.

Bush Kill at Shoemakers, PA streamflow was above median October, November, December, January, March, April, May, and June. Streamflow for January, 699ft^3/s, was the highest for the period of record, 1909-78, surpassing the mean of January 1917. February, July, August, and September streamflow were between the twenty-fifth and fiftieth percentile. Yearly mean of 336 ft^3/s was fourth highest for the period of record and 143 percent of the average for the period 1909-77.

Schuylkill River at Pottstown, PA was above median October, November, December, January, March, May, June July, August, and September. Streamflow for December, 5,213 ft^3/s. and January, 5,418 ft^3/s, were the highest for the period of record, 1927-78, surpassing the means of December 1972 and January 1976. February and April streamflow were between the twenty-fifth and fiftieth percentile. Yearly mean of 2,927 ft^3/s was third highest for the period of record and 156 percent of the average for the period 1927-77.

Yearly mean discharge at both stations was the highest since 1973. Monthly means are compared with monthly medians for the period 1941-70 at the two representative gaging stations in figure 1 and 2.

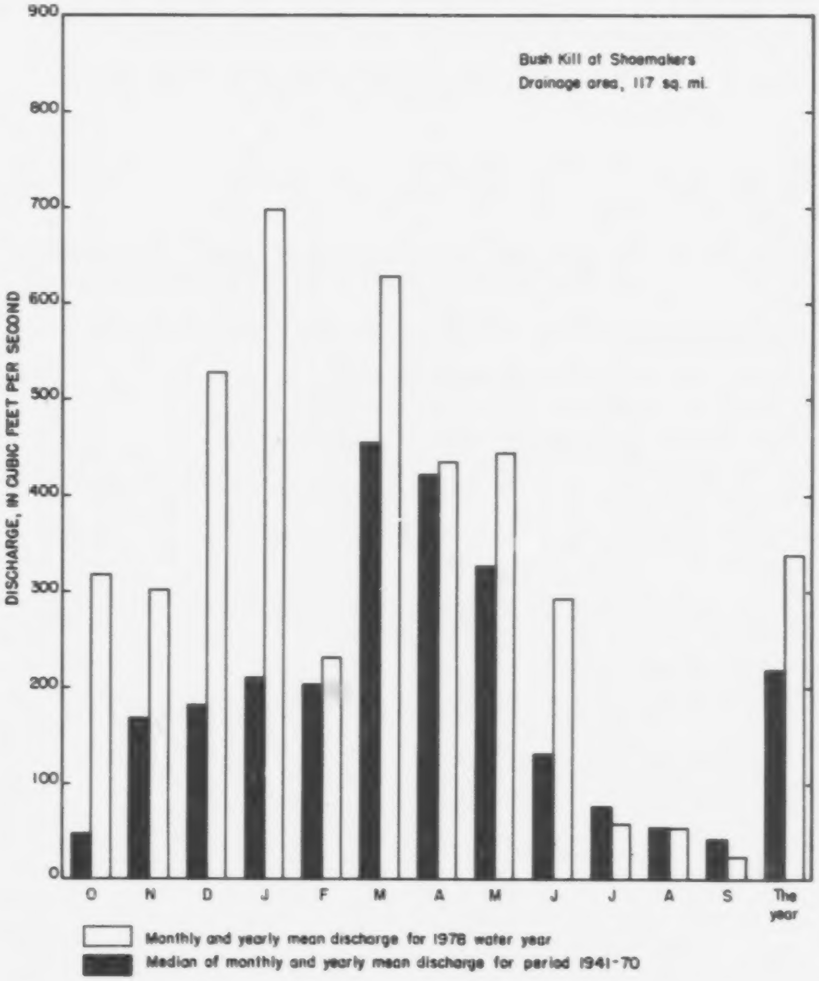

Figure 1.--Comparison of discharge at Bush Kill at Shoemakers during the 1978 water year with median discharge for period 1941-70.

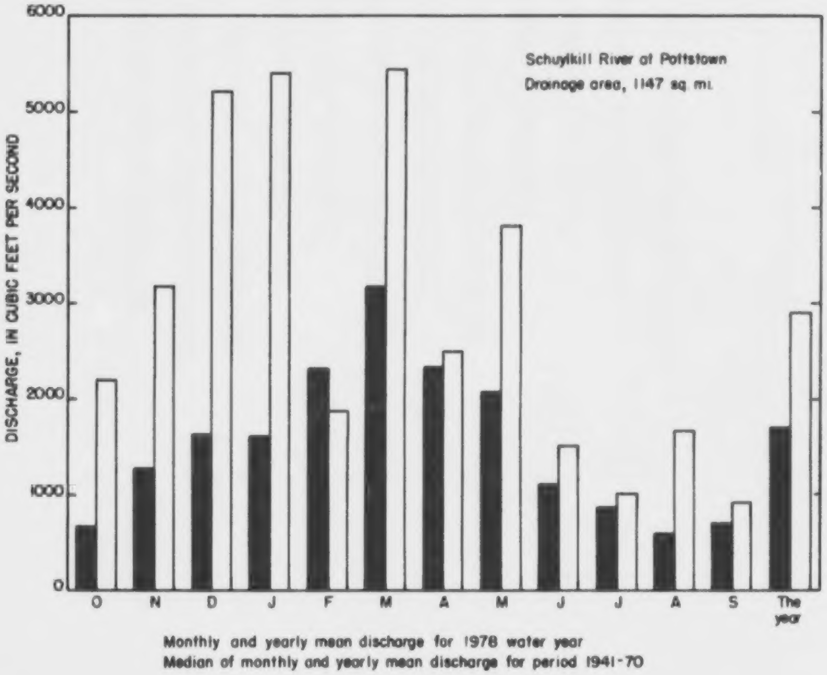

Figure 2.--Comparison of discharge at Schuylkill River at Pottstown during the 1978 water year with median discharge for period 1941-70.

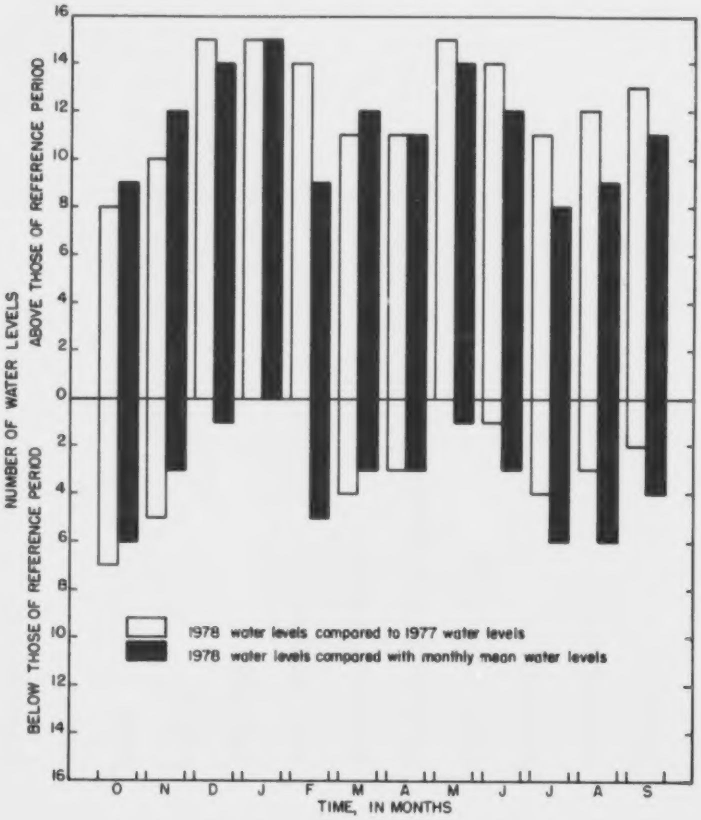

Figure 3.--Comparison of 1978 water levels in network observation wells with
a) 1977 water levels
b) monthly mean water levels for period of record.

DEFINITION OF TERMS

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year, and therefore, it first appears in this publication. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting Inch-pound units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll *a* and *b* are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$d = \sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage", although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organisms count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology.

The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt	0.004 - 0.062	Sedimentation.
Sand	0.062 - 2.0	Sedimentation or sieve.
Gravel	2.0 -64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in the solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 03041000, which appears just to the left of the station name, includes the 2-digit part number "03" plus the 6-digit downstream order number "041000".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and some miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7-digits denote the degrees, minutes, and seconds of longitude, and the last 2-digits (assigned sequentially identify the wells or other sites with a 1-second grid. See figure 4 below.

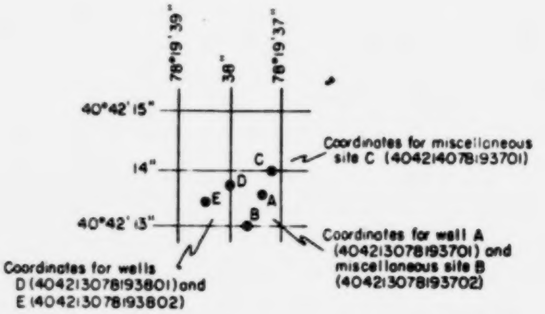
78°19'39"
38"
78°19'37"
40°42'15"
14"
40°42'13"
C
D
E
A
B
Coordinates for miscellaneous site C (404214078193701)
Coordinates for well A (404213078193701) and miscellaneous site B (404213078193702)
Coordinates for wells D (404213078193801) and E (404213078193802)

Figure 4.--System for numbering wells and miscellaneous sites (latitude and longitude).

A local well number is also assigned to the wells and consists of a 2-letter abbreviation of the county in which the well is located and a sequential number assigned at the time the well was scheduled.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium network is a network of stations which has been established to provide baseline information on the occurrence to tritium in the Nation's surface waters. In addition to the surface-water station in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurement of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents.

This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD".

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page .

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS". For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS".

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR"; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Skeleton rating tables are published, immediately following "EXTREMES", for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE". Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used for computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and resevoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair", within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended-sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure .

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. The altitude of the land-surface datum above mean sea level is given in the well description. Mean sea level is the datum plane on which the national network of precise levels is based. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective October 1978 but are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. \$1.60.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W.Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages. \$0.85

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. \$1.90.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. \$1.75.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. \$1.00.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.35.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.35.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $1.00.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $1.20.

3-A12. *Fluorometric procedures for dye tracing,* by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2 1976. 172 pages. $2.50.

3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $2.50.

3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $2.50.

3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $2.10.

4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $1.60.

4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $1.20

4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. $0.65.

4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $1.10.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases,* by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elments in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $20.00.

5-A5.* *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. $16.00.

5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $2.10.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. $2.30.

8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

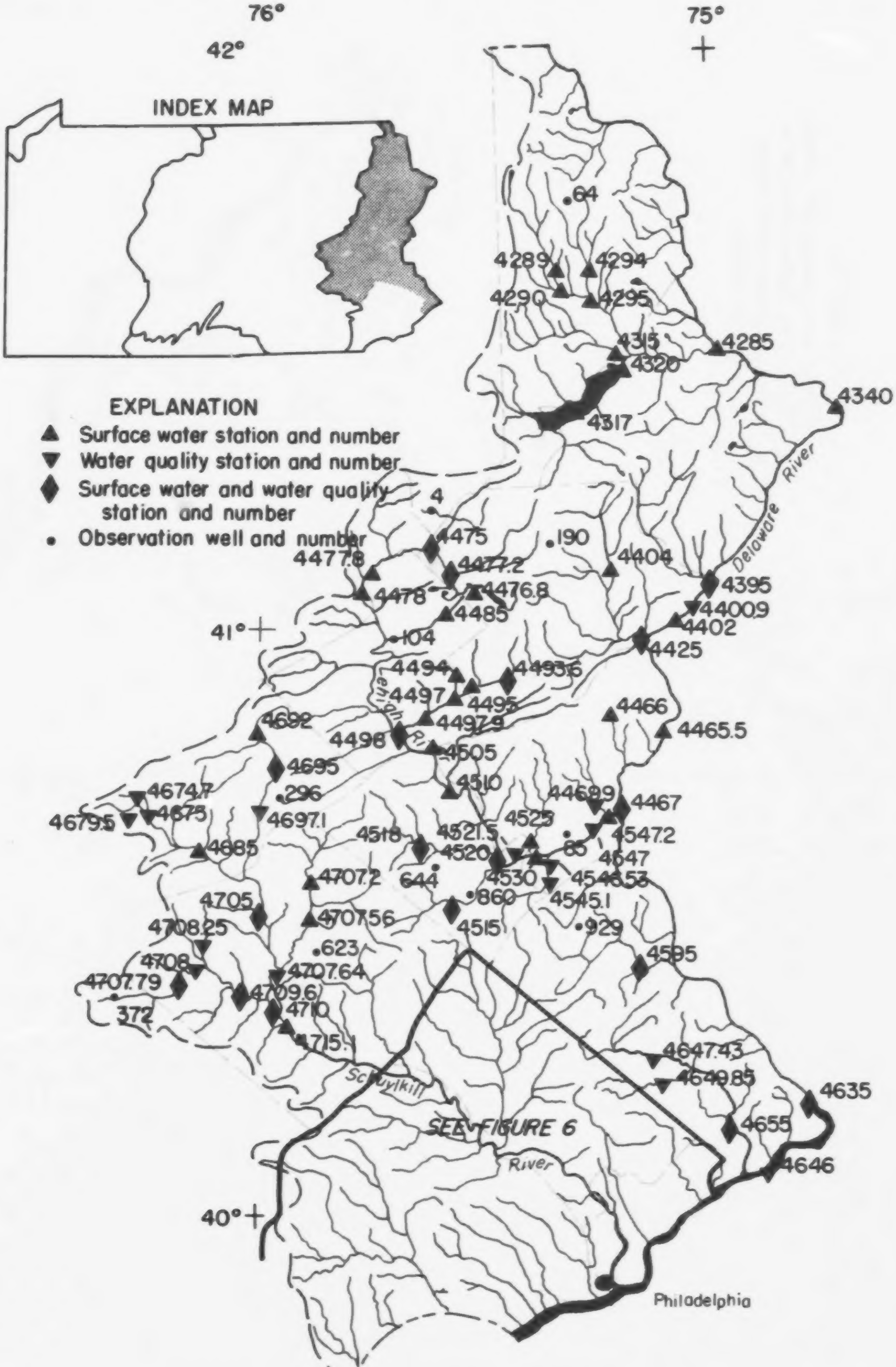
76°
75°
42°
41°
40°
INDEX MAP
EXPLANATION
▲ Surface water station and number
▼ Water quality station and number
◆ Surface water and water quality station and number
• Observation well and number
64
4289
4294
4290
4295
4315
4320
4285
4317
4340
Delaware River
4
4475
190
4477.8
4477.2
4404
4395
4478
4476.8
44009
4485
4402
104
4425
4494
4493.6
4497
4495
Lehigh R.
4466
4692
4497.9
4465.5
4498
4505
4695
4510
44689
4467
46747
296
4675
4697.1
4679.5
4518
4521.5
4525
4547.2
4685
4520
85
4647
644
4530
4546.53
4707.2
4545.1
4705
860
4707.56
4515
929
4708.25
623
4595
4708
4707.64
4707.79
4709.6
372
4710
4715.1
4647.43
4649.85
4635
Schuylkill
SEE FIGURE 6
4655
River
4646
Philadelphia

FIGURE 5—Location of data collection stations and observation wells

17

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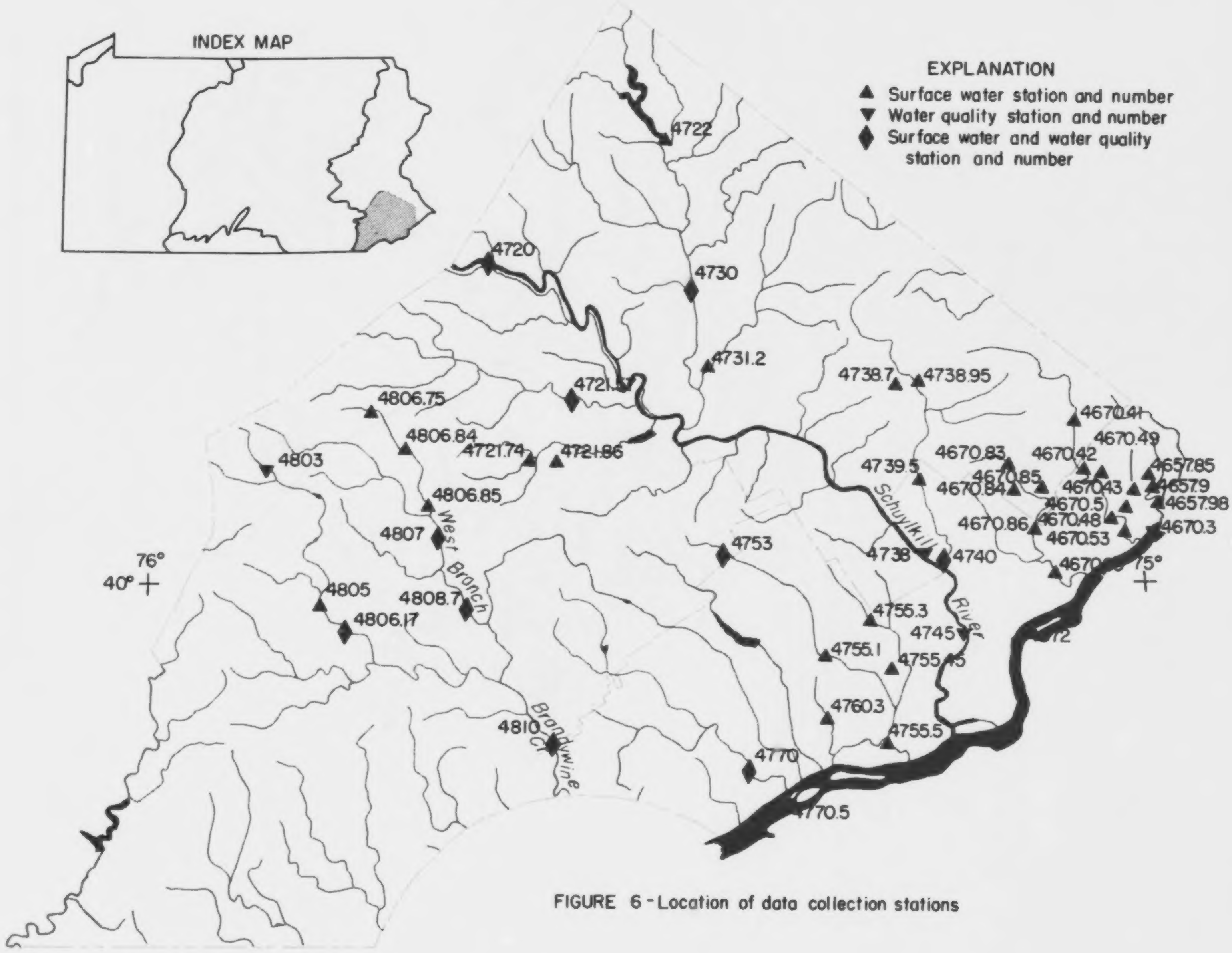
INDEX MAP
EXPLANATION
▲ Surface water station and number
▼ Water quality station and number
◆ Surface water and water quality station and number
4722
4720
4730
4731.2
4721
4721.86
4721.74
4806.75
4806.84
4803
4806.85
4807
West Branch
4805
4808.7
4806.17
4810
Brandywine Cr
4753
4770
4770.5
4738.7
4738.95
4739.5
Schuylkill River
4738
4740
4755.3
4745
4755.1
4755
4760.3
4755.5
4670.41
4670.49
4670.83
4670.42
4670.85
4670.84
4670.43
4657.85
4657.9
4657.98
4670.5
4670.48
4670.86
4670.53
4670.3
4670
72
76°
40°
75°

FIGURE 6 - Location of data collection stations

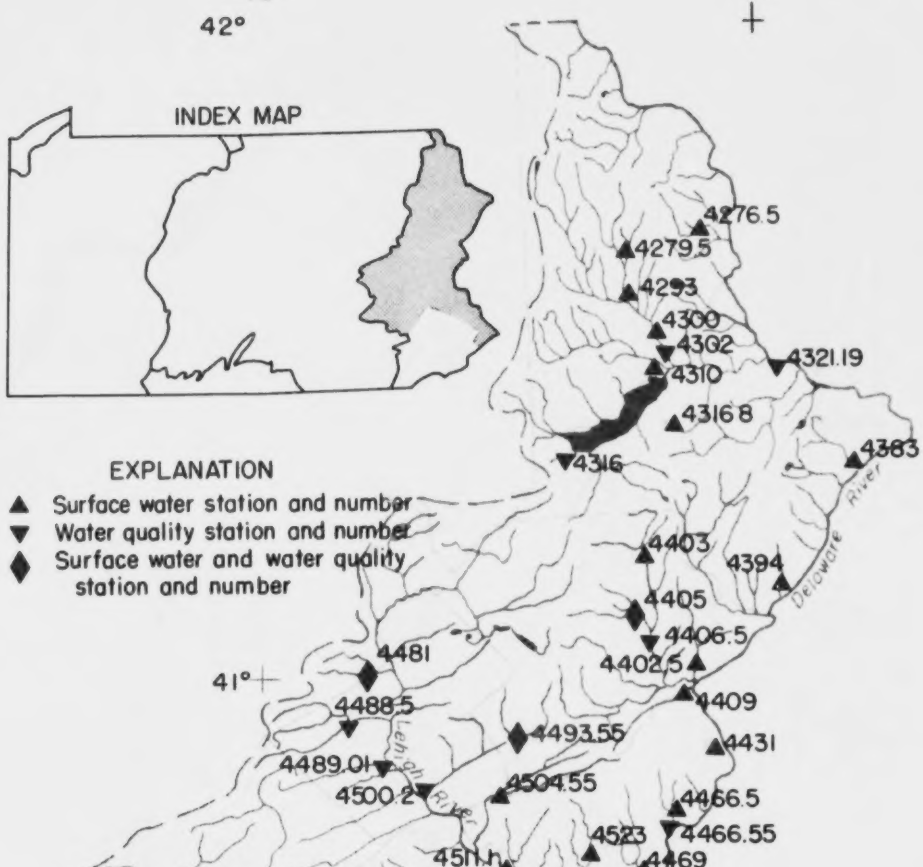
76°
75°
42°
INDEX MAP
EXPLANATION
▲ Surface water station and number
▼ Water quality station and number
◆ Surface water and water quality station and number
4276.5
4279.5
4293
4300
4302
4310
4321.19
4316.8
4316
4383
4403
4394
Delaware River
4405
4406.5
4402.5
4481
41°
4409
4488.5
Lehigh River
4493.55
4431
4489.01
4500.2
4504.55
4466.5
4466.55
4523
4511.4
4469
4675
4524
4511.65
4526
4679.48
4701.9
4707.48
4577.9
4546
4589
4708.1
4.18
4708.18
4707.58
4623
Schuylkill River
SEE FIGURE 8
40°
Philadelphia

FIGURE 7– Location of partial-record data collection stations

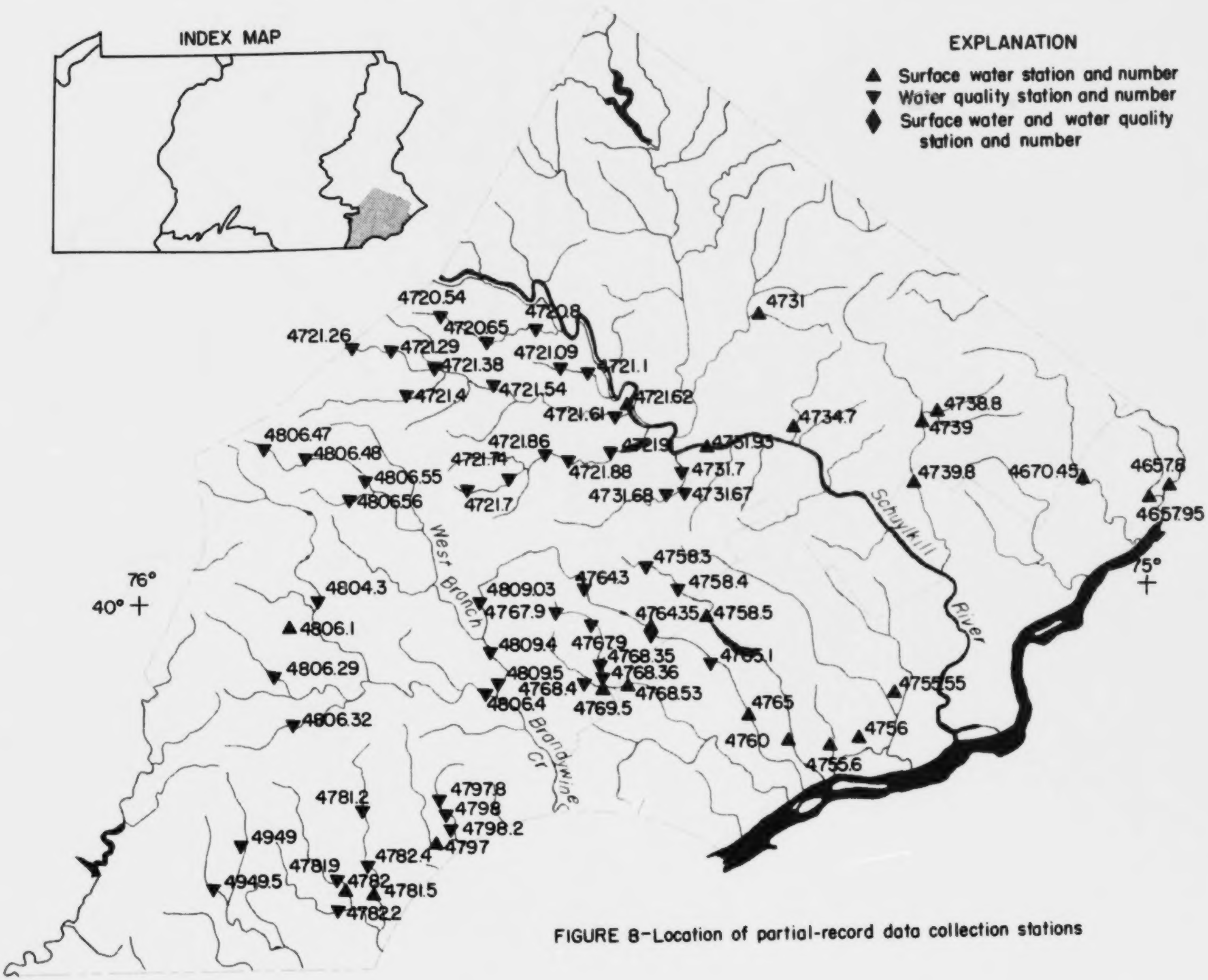
INDEX MAP
EXPLANATION
▲ Surface water station and number
▼ Water quality station and number
◆ Surface water and water quality station and number
4720.54
4720.8
472065
4721.26
4721.29
4721.09
4721.38
4721.1
4721.54
4721.4
4721.62
4721.61
4731
4734.7
4738.8
4739
4806.47
4806.48
4721.86
4721.14
4721.9
4731.93
4806.55
4721.88
4731.7
4739.8
4670.45
4657.8
4806.56
4721.7
4731.68
4731.67
4657.95
Schuylkill
River
West Branch
47583
4758.4
76°
40°
75°
4804.3
4809.03
47643
4767.9
476435
4758.5
4806.1
47679
4809.4
4768.35
4765.1
4806.29
4809.5
4768.36
4768.4
4768.53
4755.55
4806.4
4769.5
4765
4806.32
4760
4756
4755.6
Brandywine
Cr
4797.8
4781.2
4798
4798.2
4949
4797
47819
4782.4
4782
4949.5
4781.5
4782.2

FIGURE 8-Location of partial-record data collection stations

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ

LOCATION.--Lat 39°18'19", long 75°22'37", Cumberland County, Hydrologic Unit 02040204, water-quality recorder on lightship in bay opposite Bombay Hook Island, DE, and 3 mi (4.8 km) south southwest of mouth of Cohansey River, NJ.

PERIOD OF RECORD.--April 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1969 to current year.
WATER TEMPERATURES: February 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 52,800 micromhos Feb. 10, 1970; minimum, 1,500 micromhos Mar. 4, 1971.
WATER TEMPERATURES: Maximum, 30.0°C Aug. 1, 1970; minimum, freezing point on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 29,800 micromhos Mar. 9, 10, Sept. 30; minimum, 3420 micromhos Mar. 29.
WATER TEMPERATURES: Maximum, 29.0°C Aug. 14-20; minimum, freezing point on many days during January, February, and March.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	26400	18500	22900	---	---	---	20400	11300	15100	18300	11500	14900
2	24600	16100	19900	---	---	---	19300	10500	14400	19500	10900	15000
3	24600	14600	18700	22200	14500	17800	17700	10900	13500	16600	11200	13500
4	29000	14500	20000	23000	12500	17900	16800	10600	13300	17200	11500	13800
5	29000	15800	21600	22500	14400	18600	19800	12200	15500	17600	10700	14900
6	27600	15900	22400	23600	16800	20300	18400	11100	14800	20600	12500	16600
7	27900	20900	24800	25400	18100	21900	14400	10400	11800	21900	13200	18100
8	26900	21600	24600	25600	17100	22000	17300	10700	12600	22800	15100	18700
9	27100	20400	23500	23600	16200	20200	---	---	---	20300	11100	15600
10	25900	22000	23800	23800	15500	18500	---	---	---	14800	6300	11000
11	25700	21400	23500	---	---	---	---	---	---	13800	5500	10100
12	25200	20000	23000	---	---	---	---	---	---	16300	8500	12400
13	25900	19400	22800	---	---	---	21600	12200	17200	18300	10500	12900
14	29600	20900	24600	---	---	---	22400	13200	18300	19200	10600	13800
15	24800	18000	20200	---	---	---	21500	12300	17300	15900	10400	13000
16	24000	17600	20700	---	---	---	19600	10700	16000	15600	10300	12700
17	22100	13200	17300	18300	10400	14400	18500	10700	15400	17200	10900	13400
18	20300	12100	16900	15200	7030	12200	20900	12400	16400	17400	10900	13200
19	22800	14000	18300	15000	6000	11000	19100	13200	16300	15600	10500	12500
20	23200	14900	18700	17600	9460	13800	18900	11100	15400	22700	11600	16200
21	24200	12000	19400	19300	10500	15200	17500	11600	14600	17900	11100	14300
22	24500	13300	19300	17000	10100	14800	15400	7420	11700	17000	10300	14000
23	24000	15000	19500	21200	11300	16700	10800	6260	9870	18200	10700	15000
24	22700	14500	19700	21000	13300	16900	10800	5950	8890	18800	11500	15500
25	23100	15600	20000	21600	11900	17300	11200	7610	9660	19500	12000	16400
26	22400	16400	19500	19900	12800	16600	10500	5850	8400	19000	10000	14500
27	22000	15900	18600	16800	11000	13000	12800	7120	9800	14800	7880	10500
28	22200	14400	18600	16300	10300	13100	15900	9320	12200	14300	3930	7910
29	17200	17100	17200	17900	10400	13800	15700	10400	13100	11800	3800	6800
30	---	---	---	19100	10500	14800	17200	10600	13600	7050	3870	5490
31	---	---	---	---	---	---	17500	10700	13300	10900	3950	6590
MONTH	29600	12000	20700	25600	6000	16400	22400	5850	13600	22800	3800	13200

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7170	5640	6020	26400	19800	24100	11200	4780	7780	22600	16600	19900
2	---	---	---	26500	19100	23500	8770	3750	6860	23100	14900	19700
3	---	---	---	26500	21300	24200	13100	6080	9500	23500	16800	21000
4	21800	7420	13900	26900	20900	24800	13700	5290	10500	25600	17900	21700
5	22600	10900	18500	26400	19600	23500	13600	7770	10200	25600	19900	22900
6	23100	10400	15600	26200	19000	23200	12900	5780	9780	24200	18900	21900
7	17600	10500	14100	26400	14400	22200	13000	6120	9190	22800	17800	20400
8	26200	10300	16700	28900	19900	24800	12800	6240	9000	22800	18400	20400
9	27200	20800	23800	29600	22100	26100	13700	6590	9600	23000	16600	19400
10	26500	19300	23300	29600	23200	26600	13400	5660	9860	20100	16000	18300
11	25700	18000	22900	29800	22500	26800	13400	6080	9890	20600	14900	18200
12	23900	16000	21600	29800	22500	26200	---	---	---	20500	14600	18000
13	24800	17500	21600	28100	22100	25500	---	---	---	20500	15900	17900
14	25900	17600	22000	---	---	---	---	---	---	19600	14200	17900
15	24500	16400	21400	---	---	---	---	---	---	21600	14700	18600
16	26900	15200	21300	---	---	---	---	---	---	15800	10900	13100
17	26700	14600	21400	---	---	---	21200	13100	17800	15200	9880	13000
18	26400	15600	22200	---	---	---	21600	15800	19000	14900	10300	12500
19	26400	19600	23300	---	---	---	23500	18300	21100	15300	10300	13600
20	26400	19400	23800	22100	19000	20800	22000	18400	20000	---	---	---
21	27100	21600	24700	23200	16400	19900	20900	16100	18500	---	---	---
22	25900	19300	23800	21400	14800	18800	21900	15700	18400	---	---	---
23	25700	18200	22800	19800	13200	17500	22000	16100	19200	---	---	---
24	26900	20500	24000	19300	12300	17000	22100	15400	18600	---	---	---
25	27900	20100	24800	19700	12700	16600	22000	14900	18800	---	---	---
26	26900	21400	24400	20000	12500	16000	22400	16300	19400	---	---	---
27	26200	19700	23500	18700	7860	13900	23200	18300	20700	---	---	---
28	26500	18000	23600	14800	4580	9430	24600	15900	21100	---	---	---
29	---	---	---	11300	3420	7030	23500	16200	20300	---	---	---
30	---	---	---	9810	3600	6890	22400	16200	20100	---	---	---
31	---	---	---	11800	4100	7720	---	---	---	14900	10400	12500
MONTH	27900	5640	21000	29800	3420	19700	24600	3750	15000	25600	9880	18000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	15300	10500	12800	25900	18600	22300	26900	22000	24900	26500	20600	23300
2	15200	10300	12100	26500	19500	23300	26400	22000	24500	26000	20000	23800
3	14300	10300	11600	25900	21600	24200	25700	20500	23600	25700	21300	23900
4	15600	10800	12500	27100	19900	23500	25400	21800	23600	25600	20800	23700
5	15200	10600	12600	26000	19900	23700	25700	21300	23700	26200	20600	24100
6	16200	11800	13500	25900	18700	23100	25900	20300	23100	26900	20300	24200
7	16900	10800	13000	25400	18100	22300	24000	19300	22300	25700	19600	23700
8	15300	10800	12600	25100	16800	21700	23100	18000	21400	28900	21300	25100
9	14800	11900	13200	24200	15400	21300	23000	18100	21200	27700	21900	25300
10	15500	10500	13600	24300	17500	21400	23300	17400	21000	28900	22700	25800
11	15500	10500	12200	24200	16900	21900	24900	18800	21900	26000	21000	24400
12	15200	10400	12600	25200	18600	22600	24600	18100	22400	25400	19700	23200
13	16500	10400	13600	25600	17700	22900	24500	18200	22100	28900	21300	24700
14	15200	10300	12800	24800	18900	22500	24500	16800	21700	28700	22800	25900
15	15700	10500	12800	25600	19100	23300	26500	17800	21700	27200	20800	24500
16	19700	11900	14300	26700	19400	23500	26700	18600	22100	27100	20900	24000
17	19300	10500	14300	27900	21200	24100	26200	18400	21900	27100	20900	24100
18	21300	10700	14900	27900	20800	23900	26900	18800	22200	27400	20600	24300
19	22100	12000	15600	27600	19700	23200	27200	19300	23100	27600	21600	24700
20	22000	11900	15700	27100	19300	22900	27600	19100	22800	27900	21800	25300
21	22800	12000	15600	25900	19600	22900	28500	20900	24500	26000	19300	23600
22	22000	11700	15500	26900	19700	22900	27600	20900	24800	25100	19300	22800
23	22400	13400	16400	26700	19900	23300	27200	19500	24200	28300	22000	25000
24	22400	13400	16600	26400	20800	23500	26200	19900	23600	27200	20100	24400
25	22500	13900	17000	27700	21000	24500	27900	20700	24400	26900	17700	23400
26	21000	10700	17200	26400	21400	24400	27900	21600	25100	28700	21300	24500
27	19900	13200	17500	25400	19700	23400	27700	19600	24400	29000	18800	25000
28	20300	16200	17700	24500	19500	22700	26000	20300	23500	28700	22700	26100
29	20800	14300	17300	24900	19400	22900	25200	17700	22300	29400	24600	27300
30	25200	14800	19000	25900	18400	22700	25900	17900	22600	29800	24800	27800
31	---	---	---	27400	20800	24300	25200	18600	23300	---	---	---
MONTH	25200	10300	14500	27900	15400	23100	28500	16800	23000	29800	17700	24600

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	21.0	21.0	---	---	---	8.0	7.5	8.0	3.0	2.5	2.5
2	21.0	20.0	20.5	---	---	---	8.0	7.5	8.0	3.0	2.0	2.5
3	20.0	19.0	19.5	15.5	14.0	15.0	8.0	7.5	7.5	2.5	2.0	2.5
4	19.5	18.5	19.0	17.0	14.5	15.5	8.0	7.5	7.5	2.5	1.0	2.0
5	19.5	18.5	19.0	17.5	14.5	15.5	8.0	7.5	7.5	2.5	1.5	2.0
6	19.0	18.0	18.5	15.5	15.0	15.0	8.0	7.0	7.5	2.5	2.0	2.5
7	18.5	18.0	18.5	16.0	15.0	15.5	7.0	6.0	6.5	2.5	2.5	2.5
8	18.5	18.0	18.5	16.0	15.0	15.5	6.0	5.5	6.0	3.0	2.5	2.5
9	18.5	17.5	18.0	16.5	15.0	15.5	---	---	---	3.0	2.0	2.5
10	18.0	17.0	17.5	17.0	15.0	15.5	---	---	---	2.0	.0	1.0
11	17.5	17.5	17.5	---	---	---	---	---	---	1.0	.0	.5
12	17.5	17.0	17.5	---	---	---	---	---	---	.5	.0	.0
13	17.0	16.5	16.5	---	---	---	3.5	2.5	3.0	.5	.0	.5
14	16.5	15.5	16.0	---	---	---	3.5	3.0	3.0	.5	.5	.5
15	15.5	15.0	15.0	---	---	---	4.0	3.5	3.5	.5	.0	.0
16	15.5	15.0	15.0	---	---	---	4.0	3.0	3.5	.5	.0	.0
17	15.0	14.0	14.5	11.5	11.5	11.5	4.0	3.5	3.5	.5	.0	.5
18	14.0	13.5	13.5	11.5	11.0	11.5	4.0	3.5	4.0	.5	.5	.5
19	14.0	13.5	13.5	11.0	10.0	11.0	4.0	4.0	4.0	.5	.0	.5
20	13.5	13.5	13.5	11.0	10.0	10.5	4.5	4.0	4.0	1.0	.0	.5
21	14.0	13.0	13.5	11.0	10.0	10.5	4.5	4.0	4.5	.5	.5	.5
22	14.5	13.5	14.0	11.5	10.0	10.5	4.5	4.0	4.5	.5	.0	.5
23	14.5	13.5	14.0	10.5	10.0	10.0	4.5	4.0	4.0	.5	.0	.5
24	14.5	13.5	14.0	10.0	10.0	10.0	4.5	4.0	4.5	.5	.0	.5
25	14.5	13.5	14.5	10.0	9.5	10.0	4.5	4.5	4.5	1.0	.5	.5
26	14.5	13.5	14.0	10.0	8.5	9.5	4.5	3.0	4.0	1.5	1.0	1.0
27	14.0	13.5	14.0	8.5	7.5	8.0	3.5	2.5	3.0	1.0	.0	.5
28	14.5	14.0	14.5	8.0	8.0	8.0	3.0	2.5	2.5	.5	.0	.5
29	14.5	14.5	14.5	8.0	7.5	7.5	3.0	2.5	2.5	.5	.0	.0
30	---	---	---	7.5	7.5	7.5	2.5	2.5	2.5	.5	.0	.0
31	---	---	---	---	---	---	3.0	2.5	2.5	.0	.0	.0
MONTH	21.0	13.0	16.0	17.5	7.5	12.0	8.0	2.5	4.5	3.0	.0	1.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.0	.0	.0	1.0	.5	.5	8.5	7.5	8.0	12.0	11.5	12.0
2	.0	.0	.0	.5	.0	.5	9.0	8.0	8.5	12.5	11.5	12.0
3	.5	.0	.0	.5	.0	.5	8.5	8.0	8.0	13.5	12.0	12.0
4	.0	.0	.0	.5	.0	.5	8.5	8.0	8.0	14.5	12.0	12.0
5	.0	.0	.0	.5	.0	.0	8.5	8.5	8.5	12.5	12.0	12.0
6	.0	.0	.0	.5	.0	.0	9.5	8.5	8.5	12.0	11.5	12.0
7	.0	.0	.0	1.0	.0	.5	9.0	8.5	8.5	12.0	11.5	12.0
8	.0	.0	.0	.5	.0	.0	9.5	9.0	9.0	17.0	11.5	12.0
9	.0	.0	.0	.5	.0	.5	10.0	9.0	9.0	13.5	12.0	13.0
10	.0	.0	.0	.5	.5	.5	10.0	9.0	9.5	13.5	12.5	13.0
11	.0	.0	.0	1.0	.5	1.0	9.5	9.5	9.5	13.5	13.0	13.0
12	.0	.0	.0	1.5	1.0	1.0	---	---	---	14.0	13.5	13.5
13	.0	.0	.0	1.5	1.0	1.0	---	---	---	14.5	13.5	14.0
14	.0	.0	.0	---	---	---	---	---	---	20.5	14.5	15.5
15	.0	.0	.0	---	---	---	---	---	---	15.5	15.0	15.0
16	.0	.0	.0	---	---	---	---	---	---	15.0	14.5	15.0
17	1.0	.0	.0	---	---	---	11.0	10.0	10.5	15.0	14.5	15.0
18	.5	.0	.0	---	---	---	11.0	10.0	10.5	16.0	15.0	15.0
19	.5	.0	.0	---	---	---	10.5	10.0	10.5	15.5	15.0	15.5
20	1.0	.0	.0	4.0	4.0	4.0	11.0	10.5	11.0	---	---	---
21	.5	.0	.0	5.0	4.0	4.5	11.0	11.0	11.0	---	---	---
22	.0	.0	.0	5.5	4.5	4.5	11.5	11.0	11.0	---	---	---
23	.0	.0	.0	6.0	5.0	5.0	12.0	11.0	11.0	---	---	---
24	.0	.0	.0	6.0	5.5	5.5	12.0	11.0	11.5	---	---	---
25	.5	.0	.0	6.0	5.0	5.5	12.0	11.5	11.5	---	---	---
26	.5	.0	.5	6.0	5.0	5.5	12.0	11.5	11.5	---	---	---
27	.5	.0	.5	6.5	6.0	6.0	11.5	11.0	11.5	---	---	---
28	.5	.0	.5	7.5	6.0	6.5	12.0	11.0	11.0	---	---	---
29	---	---	---	8.0	6.5	7.5	12.0	11.0	11.5	---	---	---
30	---	---	---	8.0	7.0	7.5	12.0	11.5	11.5	---	---	---
31	---	---	---	8.5	7.5	8.0	---	---	---	21.0	19.5	20.0
MONTH	1.0	.0	.0	8.5	.0	3.0	12.0	7.5	10.0	21.0	11.5	13.5

01412350 DELAWARE BAY AT SHIP JOHN SHOAL LIGHTHOUSE, NJ--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	19.5	20.0	26.0	24.5	25.0	27.0	26.5	26.5	27.5	26.5	27.0
2	21.5	20.0	20.5	25.0	24.0	24.5	26.5	26.5	26.5	27.0	26.5	27.0
3	21.5	20.5	21.0	24.0	23.5	24.0	27.0	25.5	26.5	27.0	26.5	26.5
4	21.0	20.0	20.5	23.5	22.5	23.5	27.0	26.5	26.5	27.0	26.5	26.5
5	21.0	20.0	20.5	24.0	22.5	23.0	27.0	26.5	27.0	27.0	26.0	26.5
6	21.5	20.0	20.5	24.5	22.5	23.5	27.0	26.5	27.0	26.5	24.0	26.5
7	21.0	20.0	20.5	24.0	23.0	23.5	27.5	26.5	27.0	26.5	26.5	26.5
8	22.0	20.5	21.0	24.5	23.5	24.0	28.0	27.0	27.5	26.5	26.0	26.0
9	22.5	21.0	21.5	25.5	23.5	24.5	28.0	27.5	27.5	26.0	25.5	26.0
10	23.5	21.0	22.0	26.0	24.0	25.0	28.0	27.5	27.5	25.5	24.5	25.0
11	23.5	21.5	22.0	25.0	24.5	24.5	28.0	27.5	28.0	25.0	24.5	24.5
12	23.0	21.5	22.5	25.0	24.0	24.5	28.5	27.5	28.0	25.5	24.5	25.0
13	22.5	22.0	22.5	25.5	24.0	24.5	28.5	27.5	28.0	25.0	24.0	24.5
14	22.0	21.0	21.5	24.5	24.0	24.0	29.0	28.0	28.5	24.0	23.5	24.0
15	21.5	20.0	21.0	26.0	24.0	24.5	29.0	28.5	28.5	24.0	23.5	23.5
16	21.5	20.0	21.0	25.0	24.0	24.5	29.0	28.5	28.5	24.0	23.5	23.5
17	21.0	19.5	20.5	25.0	24.0	24.5	29.0	28.5	29.0	24.0	23.5	23.5
18	21.5	20.0	20.5	25.5	24.0	24.5	29.0	28.5	28.5	24.0	23.5	24.0
19	22.0	20.5	21.0	26.0	24.5	25.5	29.0	28.5	28.5	24.0	23.5	24.0
20	22.5	21.0	21.5	26.0	25.0	25.5	29.0	28.5	28.5	24.0	23.5	23.5
21	23.0	21.5	22.0	26.5	25.5	26.0	28.5	28.0	28.0	24.0	23.5	23.5
22	23.5	21.5	22.5	27.5	26.0	26.5	28.5	27.5	28.0	24.0	23.5	23.5
23	23.5	21.5	23.0	28.0	26.5	27.0	28.0	27.5	28.0	23.5	22.5	23.5
24	24.5	22.0	23.0	28.5	27.0	27.5	28.0	27.5	28.0	23.5	22.0	23.0
25	24.0	22.5	23.5	27.5	26.5	27.0	28.0	27.0	27.5	23.0	22.0	22.5
26	24.0	23.0	23.5	27.0	26.5	26.5	28.0	27.0	27.0	22.5	21.5	22.0
27	25.5	23.5	24.0	27.5	26.5	27.0	27.5	27.0	27.0	22.0	21.5	21.5
28	25.5	24.0	24.5	27.0	26.5	27.0	27.5	27.0	27.0	22.0	21.0	21.5
29	26.0	24.0	24.5	28.0	26.5	27.0	28.5	27.0	27.5	21.5	21.0	21.0
30	26.0	24.0	25.0	27.5	26.5	27.0	28.0	27.5	27.5	21.0	20.5	21.0
31	---	---	---	28.0	26.5	26.5	28.0	27.0	27.5	---	---	---
MONTH	26.0	19.5	22.0	28.5	22.5	25.0	29.0	25.5	27.5	27.5	20.5	24.0

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'31", long 74°59'11" (revised), Sullivan County, Hydrologic Unit 02040101, on left bank 1.6 mi (2.6 km) upstream from Lackawaxen River, and 4.6 mi (7.4 km) northwest of Barryville. Water-quality sampling site at discharge station.

DRAINAGE AREA.--2,023 mi^2 (5,240 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft (182.947 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 (961 km^2) of drainage area controlled by Pepacton Reservoir (see Reservoirs in Delaware River Basin), and subsequent to October 1963, entire flow from 454 mi^2 (1,176 km^2) of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow of these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft^3/s (3,680 m^3/s) Aug. 19, 1955, gage height, 26.40 ft (8.047 m) from floodmarks in gage house, from rating curve extended above 55,000 ft^3/s (1,560 m^3/s) on basis of slope-area measurement at gage height 23.19 ft (7.068 m); minimum, 122 ft^3/s (3.46 m^3/s) Sept. 5, 1953, gage height, 1.11 ft (0.338 m); minimum daily, 126 ft^3/s (3.57 m^3/s) Sept. 4, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49,400 ft^3/s (1,399 m^3/s) Jan. 9, gage height, 14.69 ft (4.478 m); minimum, 524 ft^3/s (14.84 m^3/s) Sept. 26, gage height, 2.19 ft (0.668 m); minimum daily, 646 ft^3/s (18.29 m^3/s) Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3430	2270	6400	3100	6280	1100	13700	2160	2190	1030	1130	1130
2	13700	2070	13000	2700	5010	1100	18600	2010	2050	1090	891	1210
3	9180	1920	13000	2300	4400	1100	16200	1720	1870	970	1200	1120
4	6310	1800	11200	2100	3390	1000	13000	1450	1990	1270	1110	1140
5	4700	1760	9110	2100	2500	980	13300	1570	1870	3530	1660	1020
6	3830	1910	8050	2100	2400	1000	13000	2220	1660	2200	1550	943
7	3700	1890	6830	2490	2400	1100	13300	2330	1510	1600	3350	1040
8	3010	3010	5600	2220	2500	1100	15000	2130	1990	1350	2610	1040
9	4180	6400	4900	27800	2400	1100	12600	2590	3430	1310	2190	1280
10	9510	6340	4330	33200	2200	1100	10300	4360	3140	1200	1620	1440
11	6370	12600	3350	20000	2000	1000	9080	3850	2560	1170	1330	1130
12	4750	14200	2430	13500	1900	1000	10600	3120	2200	1130	1240	1070
13	3850	11300	2600	10200	2000	1000	11300	2730	2040	988	1520	718
14	3270	6900	3500	8550	1800	1100	10400	2650	2310	908	1340	1020
15	5460	7270	10000	7170	1700	2500	9040	3370	2010	1110	1210	1040
16	7360	6110	13300	5910	1700	5000	7490	3850	1650	1290	970	1310
17	14200	5350	11600	4960	1700	4400	6230	5710	1450	1050	908	1340
18	22200	5300	9690	4200	1500	4000	5250	7750	1350	1160	908	1090
19	16500	4880	8280	3800	1400	3800	4550	10000	1330	1080	1070	1350
20	17300	4240	6980	3300	1400	4000	4730	8520	1420	1030	1150	1020
21	14200	3760	6460	3000	1400	5000	5740	7560	1310	1120	1090	842
22	10800	3610	7430	2700	1400	11000	5410	6800	1430	1290	1150	653
23	8420	3410	6230	2500	1300	12500	4630	5680	1740	1390	1420	786
24	6610	3180	5300	2400	1200	14200	4110	5090	1360	1210	1230	747
25	5410	2990	5380	2700	1200	11600	3740	5850	1210	1130	1250	646
26	4630	3850	6400	14000	1200	8970	3370	4750	1130	1120	1370	667
27	4150	4200	5000	27000	1300	13200	3060	3850	1120	1130	1470	1260
28	3780	3550	4200	16000	1200	20900	2800	3290	1110	1320	1310	1280
29	3270	3200	3900	12000	---	18100	2540	2880	1040	1290	1120	1350
30	2900	3010	3800	9600	---	16300	2350	2540	970	1530	1180	1400
31	2540	---	3700	4800	---	14100	---	2280	---	1500	818	---
TOTAL	229520	144280	211950	258400	60780	184350	255420	124660	52440	40496	42365	32082
MEAN	7404	4809	6837	8335	2171	5947	8514	4021	1748	1306	1367	1069
MAX	22200	14200	13300	33200	6280	20900	18600	10000	3430	3530	3350	1440
MIN	2540	1760	2430	2100	1200	980	2350	1450	970	908	818	646

CAL YR 1977 TOTAL 1614386 MEAN 4423 MAX 54600 MIN 356
WTR YR 1978 TOTAL 1636743 MEAN 4484 MAX 33200 MIN 646

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: 1971-73 (a).
NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1967 to current year (no record for winter months each year except water years 1968, 1977, and 1978).

INSTRUMENTATION.--Temperature recorder since October 1967.

REMARKS.--No record Oct. 1 to Jan. 6, July 15 to Sept. 30, due to instrument malfunctions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1968-75), 32.0°C Aug. 2, 3 1975; minimum (water years 1968, 1977, 1978), freezing point on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Minimum, freezing point on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										.5	.0	.5
8										1.5	.5	.5
9										2.0	.5	1.0
10										.5	.5	.5
11										1.0	.5	.5
12										1.0	.5	.5
13										1.0	.5	.5
14										.5	.5	.5
15										.5	.5	.5
16										.5	.0	.5
17										.5	.5	.5
18										.5	.0	.5
19										.5	.5	.5
20										.5	.5	.5
21										.5	.5	.5
22										.5	.0	.5
23										.5	.0	.5
24										.5	.0	.5
25										.5	.5	.5
26										1.0	.5	.5
27										.5	.5	.5
28										.5	.0	.5
29										.5	.0	.5
30										.5	.0	.0
31										.5	.0	.0
MONTH										2.0	.0	.5

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.0	.0	.5	.0	.5	6.0	4.5	5.0	12.5	10.0	11.0
2	.5	.0	.0	.5	.0	.5	5.5	4.5	5.0	13.5	9.0	11.0
3	.5	.0	.0	.5	.0	.0	4.0	2.5	3.5	14.5	10.0	12.0
4	.5	.0	.0	.5	.0	.5	3.5	2.5	3.0	14.0	10.5	12.5
5	.5	.0	.0	.5	.0	.5	4.0	3.0	3.5	12.0	11.0	11.0
6	.5	.0	.0	.5	.0	.5	5.0	3.5	4.5	10.5	9.5	10.0
7	.5	.0	.5	.5	.0	.5	6.0	5.0	5.5	11.5	9.5	10.5
8	.5	.0	.5	.5	.0	.0	5.5	4.5	5.5	13.0	10.0	11.5
9	.5	.0	.0	.5	.0	.5	5.0	3.5	4.5	14.5	11.5	13.0
10	.5	.0	.0	.5	.0	.0	6.5	4.5	5.5	13.5	13.0	13.5
11	.5	.0	.5	.5	.0	.5	7.5	6.0	7.0	15.5	12.5	14.0
12	.5	.0	.0	1.0	.0	.5	9.0	7.0	8.0	16.0	14.5	15.0
13	1.0	.0	.5	2.0	.0	1.0	9.0	7.5	8.0	15.0	14.5	15.0
14	.5	.0	.0	1.0	.5	.5	8.0	7.0	7.5	14.5	14.0	14.0
15	1.0	.0	.5	.5	.0	.5	6.5	5.5	6.0	13.5	13.0	13.5
16	.5	.0	.5	.5	.0	.5	6.5	5.0	6.0	13.0	13.0	13.0
17	1.0	.0	.5	1.5	.0	.5	7.5	6.0	6.5	13.0	12.5	13.0
18	.5	.0	.0	1.5	.0	.5	8.5	6.5	7.5	12.5	12.0	12.5
19	1.0	.0	.5	2.0	.0	1.0	8.5	7.5	8.0	15.0	12.5	13.5
20	.5	.0	.5	2.0	.0	1.0	8.0	7.5	7.5	17.0	14.5	16.0
21	.5	.0	.0	2.5	.0	1.0	7.5	7.0	7.0	17.5	16.0	17.0
22	.5	.0	.0	1.0	.5	.5	9.0	6.5	7.5	17.0	15.0	16.0
23	.5	.0	.5	3.5	1.0	2.5	10.0	7.5	9.0	16.5	15.0	16.0
24	.5	.0	.0	3.5	3.0	3.0	11.0	9.0	10.0	16.5	15.5	16.0
25	.5	.0	.0	3.0	2.0	2.5	12.0	10.0	11.0	16.5	15.0	15.5
26	.5	.0	.5	2.0	1.5	1.5	12.5	11.0	12.0	19.5	16.5	18.0
27	.5	.0	.0	2.5	1.5	2.0	12.5	11.5	12.0	21.5	19.5	20.5
28	.5	.0	.5	3.5	2.0	3.0	14.0	11.5	12.5	23.0	21.0	22.0
29	---	---	---	4.5	3.5	4.0	14.5	12.0	13.0	25.0	22.0	23.5
30	---	---	---	4.5	3.0	4.0	14.5	11.5	13.0	26.0	22.5	24.0
31	---	---	---	5.0	3.5	4.5	---	---	---	26.0	20.5	25.0
MONTH	1.0	.0	.0	5.0	.0	1.0	14.5	2.5	7.5	26.0	9.0	15.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	24.5	25.0	27.5	23.0	25.5						
2	27.0	23.5	25.0	27.0	22.5	25.0						
3	24.5	23.0	24.0	24.5	21.5	23.0						
4	24.0	21.0	22.5	22.0	20.0	21.0						
5	22.5	20.0	21.0	20.5	19.0	20.0						
6	24.0	15.5	21.0	24.0	20.0	22.0						
7	21.5	20.0	21.0	27.5	22.0	24.5						
8	22.0	20.5	21.0	29.0	24.5	26.5						
9	22.0	20.5	21.0	30.5	26.5	28.5						
10	22.5	20.0	21.0	31.0	27.0	29.0						
11	24.0	20.5	22.0	28.0	25.0	27.0						
12	26.0	22.0	24.0	28.0	23.0	25.5						
13	24.5	21.0	23.5	28.5	23.5	26.0						
14	21.5	19.5	20.5	27.5	25.0	26.0						
15	22.0	18.0	20.0	---	---	---						
16	23.0	18.5	20.5	---	---	---						
17	21.0	19.5	20.0	---	---	---						
18	23.0	19.0	21.0	---	---	---						
19	27.0	21.5	24.0	---	---	---						
20	28.0	23.0	25.5	---	---	---						
21	28.0	24.5	26.0	---	---	---						
22	27.5	24.5	26.0	---	---	---						
23	27.0	24.0	25.5	---	---	---						
24	27.5	23.0	25.0	---	---	---						
25	27.5	23.0	25.5	---	---	---						
26	25.5	24.0	24.5	---	---	---						
27	29.0	23.5	26.0	---	---	---						
28	29.5	25.5	27.5	---	---	---						
29	29.5	25.0	27.5	---	---	---						
30	29.5	25.0	27.0	---	---	---						
31	---	---	---	---	---	---						
MONTH	29.5	15.5	23.5	31.0	19.0	25.0						

01429000 WEST BRANCH LACKAWAXEN RIVER AT PROMPTON, PA

LOCATION.--Lat 41°35'14", long 75°19'38", Wayne County, Hydrologic Unit 02040103, on right bank 500 ft (150 m) down stream from Prompton Lake, 1,500 ft (460 m) upstream from bridge on U.S. Highway 6 at Prompton, and 2,000 ft (610 m) upstream from Van Auken Creek.

DRAINAGE AREA.--59.7 mi^2 (154.6 km^2).

PERIOD OF RECORD.--August 1944 to current year. Prior to October 1952, published as Lackawaxen River at Prompton.

REVISED RECORDS.--WSP 1432: 194849. WDR PA71: 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,083.78 ft (330.336 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Flow regulated by Prompton Lake 500 ft (150 m) upstream.

AVERAGE DISCHARGE.--34 years, 112 ft^3/s (3.172 m^3/s), 25.51 in/yr (648 mm/yr), adjusted for storage since January 1961.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,860 ft^3/s (166 m^3/s) Aug. 18, 1955, gage height, 9.24 ft (2.816 m), from rating curve extended above 3,600 ft^3/s (102 m^3/s); no flow July 26 to Aug. 25, 1960, result of construction work upstream.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of 16.7 ft (5.09 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,180 ft^3/s (33.4 m^3/s) Mar. 28; minimum observed, 5.0 ft^3/s (0.14 m^3/s) July 31, gage height, 0.80 ft (0.244 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	72	630	70	200	49	642	91	102	15	7.0	30
2	613	69	650	65	150	49	618	91	56	10	10	35
3	915	64	650	65	120	49	601	42	56	10	15	33
4	467	64	650	65	115	49	630	36	56	15	16	30
5	197	70	600	65	115	49	660	42	56	22	15	25
6	197	76	550	65	115	49	601	52	49	25	14	20
7	214	82	500	65	115	47	601	62	42	24	14	16
8	228	194	200	65	115	42	545	72	42	20	25	15
9	242	182	130	650	115	36	492	150	49	18	35	16
10	253	166	110	400	115	36	442	181	56	15	30	17
11	268	197	100	250	110	36	457	166	49	14	25	18
12	197	242	100	200	105	36	467	166	42	13	30	19
13	166	280	100	150	100	50	467	166	42	11	40	20
14	133	350	100	180	100	55	442	166	48	10	45	20
15	207	261	100	210	100	60	409	166	36	9.0	40	18
16	296	200	90	230	100	65	381	181	36	8.5	35	16
17	395	123	95	220	100	72	350	268	36	8.0	30	15
18	442	150	100	210	100	72	350	350	36	8.0	25	25
19	545	159	105	210	98	72	350	601	42	8.0	20	20
20	660	172	110	210	94	72	395	545	42	8.0	17	18
21	573	182	110	300	90	90	231	601	42	7.5	15	18
22	447	156	110	220	90	100	207	545	36	7.0	14	20
23	341	129	110	170	90	130	188	197	36	6.5	13	18
24	246	95	100	150	80	166	166	214	36	6.5	12	17
25	166	80	95	200	80	363	123	214	34	6.5	12	16
26	150	85	90	400	80	642	113	197	31	6.5	13	15
27	150	90	80	450	80	980	102	166	31	6.5	15	15
28	133	100	80	450	65	1180	91	150	26	6.5	18	15
29	119	200	80	450	---	1110	91	133	15	6.0	16	15
30	106	400	75	350	---	915	91	123	15	5.5	15	15
31	91	---	70	250	---	660	---	102	---	5.0	18	---
MEAN	307	156	215	227	105	238	377	201	42.2	11.0	20.9	19.7
MAX	915	400	650	650	200	1180	660	601	102	25	45	35
MIN	91	64	70	65	65	36	91	36	15	5.0	7.0	15
MEAN≠	292	157	214	232	100	259	356	202	38.2	11.8	22.4	18.9
Cfsm≠	4.89	2.63	3.58	3.88	1.68	4.34	5.97	3.38	.64	.20	.38	.32
In.≠	5.64	2.93	4.13	4.47	1.75	5.00	6.66	3.90	.71	.23	.44	.36

CAL YR 1977 MEAN 193 MAX 1960 MIN 10 MEAN≠ 193 Cfsm≠ 3.23 In.≠ 43.82
WTR YR 1978 MEAN 161 MAX 1180 MIN 5.0 MEAN≠ 159 Cfsm 2.67 In.≠ 36.20

≠ Adjusted for change in contents in Prompton Lake.

01429500 DYBERRY CREEK NEAR HONESDALE, PA

LOCATION.--Lat 41°36'26", long 75°16'03", Wayne County, Hydrologic Unit 02040103, on right bank 180 ft (55 m) upstream from unnamed tributary, 1,700 ft (518 m) downstream from General Edgar Jadwin Reservoir, 2.1 mi (3.4 km) north of Honesdale, and 2.6 mi (4.2 km) upstream from mouth.

DRAINAGE AREA.--64.6 mi^2 (167.3 km^2).

PERIOD OF RECORD.--October 1943 to current year. Published as "at Dyberry" October 1943 to September 1959 and as "near Dyberry" October 1959 to September 1961.

REVISED RECORDS.--WSP 1382: 1947(M), 1950(M), 1951-53.

GAGE.--Water-stage recorder. Datum of gage is 970.70 ft (295.869 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1957, nonrecording gage at site 1.9 mi (3.1 km) upstream at datum 13.70 ft (4.176 m) higher.

REMARKS.--Records good, except for periods of missing or doubtful gage-height record which are fair. Flow regulated since 1960 by General Edgar Jrdwin Reservoir 1,700 ft (518 m) upstream.

AVERAGE DISCHARGE.--35 years, 115 ft^3/s (3.26 m^3/s), 24.17 in/yr (614 mm/yr), adjusted for storage since October 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s (439 m^3/s) July 10, 1952, gage height, 14.6 ft (4.45 m), site and datum then in use, from rating curve extended above 2,500 ft^3/s (71 m^3/s) on basis of slope-area measurement at gage height 13.78 ft (4,200 m), site and datum then in use; no flow Oct. 2, 3, 1968, result of shutoff at General Edgar Jadwin Reservoir.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of 15.86 ft (4.834 m), site and datum then in use, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,560 ft^3/s (44.2 m^3/s) Jan. 27, gage height, 5.71 ft (1.74 m); minimum daily, 9.0 ft^3/s (0.25 m^3/s) July 23, 26-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	69	528	111	151	44	681	64	82	25	38	37
2	803	64	517	106	132	44	895	60	67	19	16	29
3	306	62	341	100	120	44	718	58	73	17	13	19
4	178	64	251	92	115	43	584	54	80	34	24	14
5	135	62	196	90	110	42	524	80	64	41	20	18
6	126	60	214	86	105	42	551	195	56	27	52	15
7	113	67	183	84	98	42	521	174	47	22	36	11
8	94	300	154	92	95	41	600	143	94	19	33	11
9	300	214	154	1210	90	41	491	158	143	18	22	15
10	379	152	133	1200	86	40	329	275	120	17	16	12
11	181	652	117	430	83	45	258	221	94	22	13	11
12	135	347	115	265	78	48	316	155	67	16	16	14
13	115	211	133	209	76	57	279	128	67	15	20	14
14	106	162	201	191	73	85	215	128	69	14	21	13
15	354	140	621	159	72	346	171	191	54	15	21	13
16	282	129	433	140	69	360	150	250	46	12	20	13
17	853	124	276	129	69	220	133	500	41	14	16	13
18	688	135	214	120	68	176	123	700	39	15	12	14
19	419	111	199	115	62	154	111	600	42	14	10	80
20	672	100	171	109	59	185	167	500	39	12	10	24
21	416	96	232	100	57	257	238	396	35	11	10	20
22	248	94	317	97	55	800	177	305	46	10	10	24
23	183	88	204	93	52	791	132	211	37	9.0	11	22
24	152	88	166	92	51	923	115	171	30	15	10	17
25	131	82	300	90	49	679	102	230	26	10	10	14
26	117	196	291	872	51	416	97	201	24	9.0	11	12
27	115	152	209	1380	47	727	89	147	27	9.0	12	12
28	102	117	130	628	45	1340	82	122	25	9.0	11	11
29	92	104	125	306	---	1180	74	107	22	10	10	11
30	82	104	124	217	---	1010	69	111	21	12	10	11
31	74	---	115	175	---	751	---	101	---	20	47	---
TOTAL	8178	4346	7364	9088	2218	10973	8912	6736	1677	512.0	581	544
MEAN	264	145	238	293	79.2	354	297	217	55.9	16.5	18.7	18.1
MAX	853	652	621	1380	151	1340	895	700	143	41	52	80
MIN	74	60	115	84	45	40	69	54	21	9.0	10	11
MEAN≠	264	145	238	293	79.2	358	293	217	55.9	16.5	18.7	18.1
CFSM≠	4.09	2.24	3.68	4.54	1.23	5.54	4.54	3.36	.87	.26	.29	.28
IN.≠	4.72	2.50	4.24	5.23	1.28	6.39	5.07	3.87	.97	.30	.33	.31

CAL YR 1977 TOTAL 56643.6 MEAN 155 MAX 1780 MIN 8.8 MEAN≠ 155 CFSM≠ 2.40 IN.≠ 32.63
WTR YR 1978 TOTAL 61129.0 MEAN 167 MAX 1380 MIN 9.0 MEAN≠ 167 CFSM≠ 2.59 IN.≠ 35.21

≠ Adjusted for change of contents in General Edgar Jadwin Reservoir.

01431500 LACKAWAXEN RIVER AT HAWLEY, PA

LOCATION.--Lat 41°28'34", long 75°10'21", Wayne County, Hydrologic Unit 02040103, on left bank at Church Street Bridge in Hawley, 700 ft (213 m) upstream from Wallenpaupack Creek, and 3,000 ft (914 m) downstream from Middle Creek.

DRAINAGE AREA.--290 mi^2 (751 km^2).

PERIOD OF RECORD.--July 1908 to September 1917, August 1938 to current year. Monthly discharge only for some periods, published in WSP 1302. October 1917 to December 1919, gage heights and discharge measurements only, in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 1951: 1938-41. WSP 1302: 1909-17. WSP 1432: 1942. WSP 1502: 1956.

GAGE.--Nonrecording gage, water-stage recorder, and crest-stage gage. Datum of gage is 869.00 ft (264.871 m) National Geodetic Vertical Datum of 1929. Prior to 1938, nonrecording gage at same site and datum. August 10, 1938 to August 19, 1955, water-stage recorder and August 20, 1955 to February 13, 1956, nonrecording gage at site 1,000 ft (300 m) downstream at same datum.

REMARKS.--Records poor. Regulation by Prompton Lake and, at high flow, by General Edgar Jadwin Lake located 14.9 mi (24.0 km) and 13.0 mi (20.9 km) upstream, respectively (see p. 32).

AVERAGE DISCHARGE.--49 years (1908-17, 1938-78), 487 ft^3/s (13.8 m^3/s), 22.80 in/yr (579 mm/yr), adjusted for storage since October 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,900 ft^3/s (1,470 m^3/s) Aug. 19, 1955, gage height, 24.8 ft (7.56 m) at present site, 20.6 ft (6.28 m) at former site, from floodmark, from rating curve extended above 12,000 ft^3/s (340 m^3/s) on basis of slope-area measurement at gage height 24.2 ft (7.38 m) at present site, 20.1 ft (6.13 m) at former site; minimum daily, 8 ft^3/s (0.23 m^3/s) Sept. 8, 1909.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of 19.1 ft (5.82 m) at present site, 13.9 ft (4.24 m) at former site, from floodmarks, discharge, 27,600 ft^3/s (782 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,080 ft^3/s (172 m^3/s) Jan. 9, gage height, 8.05 ft (2.454 m); minimum observed, 39 ft^3/s (1.10 m^3/s) July 26, 27; minimum daily, 39 ft^3/s (1.10 m^3/s) July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	541	325	1720	480	772	175	2730	277	349	87	87	181
2	1790	302	2180	440	676	175	3310	266	298	84	80	133
3	1160	295	1650	410	585	170	2490	259	310	84	72	97
4	784	295	1200	380	473	170	1880	246	354	122	71	77
5	585	295	1030	360	453	165	1910	439	295	163	80	71
6	488	295	953	350	434	160	1960	827	249	122	101	68
7	473	325	848	340	410	155	1970	778	226	99	145	54
8	397	1340	682	345	380	155	2100	670	310	87	145	48
9	563	1530	640	4430	360	150	1710	784	618	80	118	59
10	1070	1050	568	3550	340	150	1320	1080	536	73	99	54
11	736	2490	509	1920	310	150	1140	911	392	71	76	59
12	557	1840	498	1300	290	150	1210	712	291	68	87	60
13	434	1230	470	1020	280	200	1140	596	263	63	239	71
14	388	946	600	883	270	300	953	629	266	61	173	59
15	953	784	1970	784	260	1100	790	1010	239	58	108	51
16	1090	688	2000	652	250	1450	682	1080	204	54	84	50
17	3260	658	1420	602	240	1100	596	2410	184	61	73	50
18	3140	814	1150	612	230	850	530	2900	176	71	67	50
19	2000	670	1040	585	220	760	483	2710	181	63	59	163
20	2500	568	897	1180	215	850	808	1810	187	54	52	176
21	1870	514	1040	1440	210	1440	1030	1360	170	50	48	138
22	1310	499	1420	1230	205	3140	827	1060	150	47	47	122
23	1010	453	1090	1010	200	3490	646	814	145	42	51	108
24	802	439	855	855	195	3620	552	784	124	61	51	90
25	682	420	1090	953	190	2580	483	967	102	48	50	79
26	618	883	1420	2780	185	1790	444	766	99	40	54	69
27	579	897	939	3850	180	3710	401	607	104	39	59	61
28	520	676	766	2700	180	4980	370	504	104	40	54	58
29	453	579	634	1670	---	4310	337	429	94	45	52	50
30	406	546	580	1210	---	3670	306	392	94	53	48	47
31	370	---	520	974	---	2810	---	362	---	71	59	---
MEAN	1017	755	1047	1268	321	1422	1170	917	237	69.7	83.5	81.8
MAX	3260	2490	2180	4430	772	4980	3310	2900	618	163	239	181
MIN	370	295	470	340	180	150	306	246	94	39	47	47
MEAN≠	1002	756	1046	1273	316	1446	1146	918	233	70.5	85.0	81.0
Cfsm≠	3.46	2.61	3.61	4.39	1.09	4.99	3.95	3.17	.80	.24	.29	.28
In.≠	3.99	2.91	4.16	5.06	1.14	5.75	4.41	3.65	.89	.28	.33	.31

CAL YR 1977 MEAN 703 MAX 6450 MIN 45 MEAN≠ 703 Cfsm≠ 2.42 In.≠ 32.95
WTR YR 1978 MEAN 704 MAX 4980 MIN 39 MEAN≠ 703 Cfsm≠ 2.42 In.≠ 32.88

≠ Adjusted for change in contents in Prompton Lake and General Edgar Jadwin Reservoir.

01432000 WALLENPAUPACK CREEK AT WILSONVILLE, PA

LOCATION.--At hydroelectric plant of Pennsylvania Power and Light Co., at lower end of penstock, at Kimble, 3 mi (5 km) east of dam which is at lat 41°27'33", long 75°11'08", Pike County, Hydrologic Unit 02040103, at Wilsonville, 1.2 mi (1.9 km) south of Hawley.

DRAINAGE AREA.--228 sq mi (591 sq km).

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1918, 1923-24. WSP 1432: 1920-21. The mean discharge for September 1966 has been corrected to 141 ft^3/s (3.99 m^3/s), superseding figure published in WDR PA-66.

GAGE.--Daily discharge determined from flow through turbines, computed from records of generator output and flow over roller gates, computed on basis of head on gates. Prior to Nov. 3, 1925, nonrecording gage at site 1,000 ft (300 m) downstream from dam at datum 1,146.78 ft (349.539 m) National Geodetic Vertical Datum, unadjusted.

REMARKS.--Records good. No flow over spillway or roller gates. Flow regulated by Lake Wallenpaupack (see p. 32).

COOPERATION.--Records of generator load, operation of powerplant, net operating head, water-surface elevations in lake and daily discharges furnished by Pennsylvania Power and Light Co., in connection with a Federal Power Commission project.

AVERAGE DISCHARGE.--69 years, 365 ft^3/s (10.34 m^3/s), 21.74 in/yr (552 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6,440 ft^3/s (183 m^3/s) June 30, 1973; no flow at times each year subsequent to Nov. 3, 1925.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	713	621	.00	521	1830	859	947	.00	461	.00	39	.00
2	.00	592	.00	696	1840	921	962	23	492	.00	.00	18
3	911	589	18	1010	1820	836	1220	.00	.00	.00	223	.00
4	479	.00	.00	971	1550	.00	1700	37	.00	.00	.00	.00
5	265	.00	474	967	1440	.00	1700	.00	818	472	.00	233
6	233	.00	477	984	1710	1190	1680	.00	821	476	.00	275
7	338	1010	986	1010	1020	581	1710	.00	811	467	.00	258
8	.00	954	946	1020	1490	471	1840	.00	802	.00	232	242
9	.00	955	939	1020	1450	481	1840	.00	825	.00	261	.00
10	793	952	884	974	1430	473	1840	.00	.00	453	247	.00
11	718	423	391	1780	891	.00	1230	33	.00	452	278	239
12	299	.00	960	1680	108	.00	1830	44	468	429	.00	246
13	240	.00	914	1680	978	501	1840	.00	465	461	.00	238
14	237	34	945	1790	993	529	1830	.00	458	458	237	266
15	.00	.00	958	1780	1020	472	.00	923	474	.00	186	273
16	.00	.00	927	635	1500	468	.00	981	457	42	243	.00
17	1100	.00	488	.00	1490	466	994	1240	.00	455	248	.00
18	1580	.00	842	.00	605	.00	502	1880	.00	501	225	982
19	1600	.00	964	.00	249	.00	.00	1790	457	473	26	473
20	1580	.00	912	.00	1050	520	13	1850	225	950	.00	254
21	1590	16	918	.00	1210	.00	.00	1600	193	949	269	287
22	1440	.00	902	.00	1230	.00	.00	1400	211	150	.00	234
23	1460	.00	887	287	1140	.00	.00	476	247	.00	.00	.00
24	1460	.00	76	1690	951	.00	439	918	.00	469	232	.00
25	1470	.00	.00	1840	3.3	.00	.00	476	.00	187	243	236
26	957	.00	613	1720	.00	.00	.00	438	206	244	.00	242
27	584	.00	980	1810	1170	97	.00	.00	355	285	34	28
28	536	.00	1050	1820	963	464	.00	.00	238	.00	243	.00
29	8.8	.00	1010	1830	---	485	.00	.00	232	.00	375	141
30	.00	.00	969	1830	---	966	.00	446	217	.00	238	.00
31	608	---	257	1830	---	920	---	488	---	472	227	---
TOTAL	21199.80	6146.00	20687.00	33175.00	31131.30	11700.00	24117.00	15043.00	9933.00	8845.00	4306.00	5155.00
MEAN	684	205	667	1070	1112	377	804	485	331	285	139	172
MAX	1600	1010	1050	1840	1840	1190	1840	1880	825	950	375	982
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1977 TOTAL 168443.60 MEAN 461 MAX 1710 MIN .00
WTR YR 1978 TOTAL 191448.10 MEAN 525 MAX 1880 MIN .00

LAKES AND RESERVOIRS IN LACKAWAXEN RIVER BASIN

01428900 PROMPTON RESERVOIR.--Lat 41°35'18", long 75°19'39", Wayne County, Hydrologic Unit 02040103, at dam on West Branch Lackawaxen River, 0.3 mi (0.5 km) north of Prompton, 0.4 mi (0.6 km) upstream from highway bridge and 0.5 mi (0.8 km) upstream from Van Auken Creek. DRAINAGE AREA, 59.6 mi^2 (154 km^2). PERIOD OF RECORD, December 1960 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockfill dam with ungaged bedrock spillway at elevation 1,205.00 ft (367.284 m). Storage began July 1960. Capacity at elevation 1,205.00 ft (367.284 m) is 51,700 acre-ft (63.7 hm^3). Ordinary minimum (conservation) pool elevation, 1,125.00 ft or 342.900 m (capacity, 3,420 Acre-ft or 4.22 hm^3). Reservoir is used for flood control and recreation. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,170 acre-ft (10.1 hm^3) June 29, 1973 (elevation, 1,138.40 ft or 347.070 m); minimum (after first filling), 2,920 acre-ft (3.60 hm^3) Sept. 27, 1964 (elevation, 1,123.20 ft or 342.351 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 5,330 acre-ft (6.57 hm^3) March 28 (elevation, 1,131.20 ft or 344.790 m); minimum, 3,420 acre-ft (4.22 hm^3) July 2, 3, 9-31 (elevation, 1,125.00 ft or 342.900 m).

01429400 GENERAL EDGAR JADWIN RESERVOIR.--Lat 41°36'44", long 75°15'55", Wayne County, Hydrologic Unit 02040103, at dam on Dyberry Creek, 0.45 mi (0.72 km) upstream from unnamed tributary, 2.4 mi (3.9 km) north of Honesdale, and 2.9 mi (4.7 km) upstream from mouth. DRAINAGE AREA, 64.5 mi^2 (167.1 km^2). PERIOD OF RECORD, October 1959 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockfill dam with ungated, concrete spillway at elevation 1,053.00 ft (320.954 m). Storage began in October 1959. Capacity at elevation 1,053.00 ft (320.954 m) is 24,500 acre-ft (30.2 hm^3). Reservoir is used for flood control. Figures given herein represent total contents. Regulation is accomplished by discharge through an ungated tunnel. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 6,520 acre-ft (8.04 hm^3) June 19, 1973 (elevation, 1,017.40 ft or 310.104 m); minimum, no storage many times.

EXTREMES FOR CURRENT YEAR: Maximum contents, 2,360 acre-ft (2.91 hm^3) Jan. 27 (elevation, 1,002.28 ft or 305.495 m); minimum, no storage many times.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek, at Wilsonville, 1.2 mi (1.9 km) south of Hawley and 1.5 mi (2.4 km) upstream from mouth. DRAINAGE AREA, 228 mi^2 (591 km^2). PERIOD OF RECORD, January 1926 to current year. GAGE, vertical staff. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Power and Light Co.).

Reservoir formed by concrete gravity-type and earthfill dam, with concrete spillway at elevation 1,176.00 ft (358.445 m) in two sections. Spillway equipped with roller gate, 14 ft high (4.267 m) on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation in January 1926. Total capacity at elevation 1,190.00 ft (362.712 m)(top of gates) is 209,300 acre-ft (258 hm^3), of which 157,800 acre-ft (195 hm^3) is controlled storage above elevation 1,160.00 ft (353.568 m) (minimum pool). Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents. Records furnished by Pennsylvania Power and Light Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 178,200 acre-ft (220 hm^3) Aug. 19-21, 1955 (elevation, 1,193.45 ft or 363.764 m); minimum (after first filling), 12,280 acre-ft (15.1 hm^3) Mar. 28, 1958 (elevation, 1,162.60 ft or 354.360 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 139,360 acre-ft (172 hm^3) May 30, June 5 (elevation, 1,186.80 ft or 361.737 m); minimum, 60,240 acre-ft (74.3 hm^3) Mar. 14 (elevation, 1,172.20 ft or 357.287 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)
	01428900	Prompton Lake		01429400	General Edgar Jadwin Reservoir	
Sept. 30	1,128.74	4,540	--	977.21	0	0
Oct. 31	1,125.67	3,610	- 15.1	976.50	0	0
Nov. 30	1,125.87	3,660	+ 0.8	977.29	0	0
Dec. 31	1,125.58	3,580	- 1.3	977.16	0	0
CAL YR 1977	--	--	0	--	--	0
Jan. 31	1,126.66	3,880	- 4.9	977.81	0	0
Feb. 28	1,125.63	3,600	- 5.0	975.90	0	0
Mar. 31	1,129.82	4,880	+ 20.8	984.26	213	+ 3.5
Apr. 30	1,125.80	3,640	- 20.8	976.38	0	- 3.6
May 31	1,125.90	3,670	+ 0.5	976.97	0	0
June 30	1,125.05	3,430	- 4.0	975.37	0	0
July 31	1,125.23	3,480	+ 0.8	975.96	0	0
Aug. 31	1,125.52	3,570	+ 1.5	976.18	0	0
Sept. 30	1,125.35	3,520	- 0.8	974.68	0	0
WTR YR 1978	--	--	- .4	--	--	0
	01431700	Lake Wallenpaupack				
Sept. 30	1,174.10	70,120	--			
Oct. 31	1,174.30	71,160	+ 16.9			
Nov. 30	1,180.00	101,600	+511.6			
Dec. 31	1,181.70	110,850	+150.4			
CAL YR 1977	--	--	+ 12.0			
Jan. 31	1,182.60	115,800	+ 80.5			
Feb. 28	1,174.20	70,640	-813.1			
Mar. 31	1,181.80	111,400	+662.9			
Apr. 30	1,182.70	116,350	+ 83.2			
May 31	1,186.70	138,790	+364.9			
June 30	1,184.80	128,080	-180.0			
July 31	1,181.90	111,950	-262.3			
Aug. 31	1,180.80	105,920	- 98.1			
Sept. 30	1,178.90	95,660	-172.4			
WTR YR 1978	--	--	+ 35.3			

01434000 DELAWARE RIVER AT PORT JERVIS, NY

LOCATION.--Lat 41°22'14", long 74°41'52", Pike County, Pa., Hydrologic Unit 02040104, on right bank 250 ft (76 m) downstream from bridge (on U.S. Highways 6 and 209) between Port Jervis, N.Y. and Matamoras, Pa., 1.2 mi (1.9 km) upstream from Neversink River, and 6.5 mi (10.5 km) downstream from Mongaup River. Water-quality sampling site at discharge station.

DRAINAGE AREA.--3,076 mi^2 (7,967 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1904 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1031: 1905-36. WRD NY 1971: 1970.

GAGE.--Water-stage recorder. Datum of gage is 415.35 ft (126.599 m) National Geodetic Vertical Datum of 1929. October 1904 to August 13, 1928, nonrecording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Bureau prior to June 20, 1914.

REMARKS.--Records good. Flow regulated by Lake Wallenpaupack and by Toronto, Cliff Lake, and Swinging Bridge Reservoirs (see Reservoirs in Delaware River Basin) and smaller reservoirs. Large diurnal fluctuations at medium and low flows caused by powerplants on tributary streams. Subsequent to September 1954, entire flow from 371 mi^2 (961 km^2) of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi^2 (1,176 km^2) of drainage area controlled by Cannonsville Reservoir (see Reservoirs in Delaware River Basin). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 233,000 ft^3/s (6,600 m^3/s) Aug. 19, 1955, gage height, 23.91 ft (7.288 m), from floodmarks in gage house, from rating curve extended above 89,000 ft^3/s (2,520 m^3/s) on basis of slope-area measurement of peak flow; minimum observed, 175 ft^3/s (4.96 m^3/s) Sept. 23, 1908, gage height, 0.6 ft (0.18 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--The U.S. Weather Bureau reported a discharge of 205,000 ft^3/s (5,810 m^3/s) Oct. 10, 1903, gage height, 23.1 ft (7.04 m), from rating curve extended above 70,000 ft^3/s (1,980 m^3/s) by velocity-area studies; stage on Mar. 8, 1904, was 25.5 ft (7.77 m), ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62,400 ft^3/s (1,770 m^3/s) Jan. 9, gage height, 12.44 ft (3.792 m); minimum, 664 ft^3/s (18.8 m^3/s) Sept. 26, gage height, 1.64 ft (0.500 m); minimum daily, 995 ft^3/s (28.2 m^3/s) Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5940	4050	8500	5220	10800	2600	19500	3090	3900	1340	1780	1450
2	15000	3730	16400	5150	9100	2500	24700	2700	3760	1270	1350	1420
3	13800	3760	16700	5390	8710	2500	23100	2380	3230	1250	1330	1350
4	9750	3290	14600	4920	7610	2820	19000	2130	3480	1250	1650	1260
5	7020	2890	12500	4700	6230	2110	18000	2480	3480	3970	1530	1370
6	5870	3140	11200	4730	5910	2530	18300	3650	3590	3280	1910	1390
7	5770	3650	10100	4920	5150	3180	18100	3560	3340	2500	3580	1410
8	4570	6270	8970	4350	6120	2400	20200	3310	3820	1880	3750	1410
9	5020	10900	8090	35200	6270	2150	17900	3560	5980	1490	3280	1450
10	12100	10400	7210	43500	5730	2290	15100	5940	5660	1590	2880	1540
11	9620	15600	5700	27600	4920	2150	12900	5980	4350	1700	2320	1390
12	7290	18100	4950	18800	4200	2000	14200	5120	3960	1690	1740	1590
13	5870	14600	5120	14900	4170	2020	15100	4540	3950	1600	1580	1260
14	5350	11600	6160	13000	4760	3180	14000	4140	4060	1470	2140	1410
15	7170	9660	12600	11500	4510	5390	11500	6680	3820	1530	1750	1460
16	10900	8300	17700	9620	4600	8840	9360	7690	3160	1470	1640	1480
17	15800	7210	15400	7100	4510	8220	8500	10800	2530	1490	1310	1560
18	29600	7410	13300	6450	3990	6870	7930	14600	2160	1670	1240	1720
19	21800	6900	11900	6340	3210	5940	6340	17900	2530	1750	1270	2520
20	22300	6160	10500	5420	3210	6490	6410	15500	2410	1680	1250	2170
21	19700	5520	10100	5020	3760	7170	7650	13100	2250	2110	1230	1690
22	15500	5150	11900	4860	3700	14600	7290	11400	2070	2020	1360	1670
23	12800	4950	10400	4510	3850	18200	6230	9230	2420	1660	1460	1120
24	10700	4570	8670	5700	3530	20700	5910	7970	2010	1520	1360	1030
25	9230	4360	7730	6090	2890	16800	5290	9440	1520	1560	1540	1190
26	7730	5020	10700	16000	2170	13500	4630	7930	1740	1380	1570	995
27	7130	6340	9890	40400	2200	18100	4290	6230	1530	1420	1600	1310
28	6270	5560	9010	27200	2800	30900	3990	5350	1760	1740	1480	1410
29	5220	5020	7730	19200	---	26800	3670	4760	1520	1390	1600	1420
30	4440	4920	6940	15000	---	24200	3400	4570	1420	1490	1690	1610
31	4260	---	6490	12600	---	20800	---	4290	---	1810	1320	---
TOTAL	323520	209050	317160	395390	138610	287950	352490	210020	91410	53970	55490	44055
MEAN	10440	6968	10230	12750	4950	9289	11750	6775	3047	1741	1790	1469
MAX	29600	18100	17700	43500	10800	30900	24700	17900	5980	3970	3750	2520
MIN	4260	2890	4950	4350	2170	2000	3400	2130	1420	1250	1230	995

CAL YR 1977 TOTAL 2382998 MEAN 6529 MAX 69100 MIN 800
WTR YR 1978 TOTAL 2479115 MEAN 6792 MAX 43500 MIN 995

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-60, 1964 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to September 1973.
WATER TEMPERATURES: February 1957 to September 1960, January 1973 to September 1973, June 1974 to current year.
SUSPENDED-SEDIMENT DISCHARGE: February 1957 to September 1960, March 1970 to June 1976.

INSTRUMENTATION.--Temperature recorder since January 1973.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1957-59, 1973-78), 29.5°C July 19, 1959, Aug. 3, 1975; minimum (water years 1958-60, 1973, 1975-78), freezing point on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.5°C July 24; minimum, freezing point on many days during winter period.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	15.0	15.0	10.0	9.0	9.5	4.0	3.5	4.0	.5	.0	.5
2	15.5	14.0	15.0	10.5	9.5	10.0	4.5	4.0	4.0	.5	.5	.5
3	14.5	13.5	14.0	11.5	10.0	11.0	5.0	4.5	4.5	.5	.5	.5
4	13.5	12.5	13.0	13.0	11.5	12.5	5.0	1.0	4.5	1.5	.5	.5
5	13.0	12.0	12.5	13.5	12.5	13.0	4.5	2.5	3.5	1.0	.0	.5
6	13.0	12.5	12.5	13.5	13.0	13.0	3.0	2.5	2.5	1.0	.5	.5
7	13.0	12.0	12.5	13.0	12.0	13.0	2.5	1.5	2.0	1.0	.5	1.0
8	12.0	11.5	11.5	12.0	11.0	11.5	2.0	1.5	1.5	2.0	.5	1.0
9	12.0	11.5	11.5	11.5	11.0	11.5	2.0	1.0	1.5	2.5	.0	1.5
10	12.0	11.0	11.5	12.0	11.5	12.0	1.0	.5	.5	.5	.5	.5
11	12.0	11.5	11.5	12.0	10.0	11.0	.5	.0	.5	1.0	.5	.5
12	12.5	11.5	12.0	10.0	7.5	8.5	.5	.5	.5	1.0	.5	.5
13	12.0	11.5	11.5	8.0	6.5	7.5	.5	.5	.5	1.0	.5	.5
14	11.5	10.5	11.0	6.5	6.0	6.0	1.0	.5	1.0	.5	.5	.5
15	10.5	10.0	10.5	6.5	5.5	6.0	1.5	1.0	1.0	.5	.5	.5
16	10.0	9.5	10.0	8.0	6.5	7.5	2.0	1.0	1.5	.5	.5	.5
17	10.0	9.0	9.5	9.0	8.0	8.5	3.5	2.0	3.0	.5	.5	.5
18	9.0	8.0	8.5	9.0	8.0	8.5	3.5	2.5	3.0	.5	.5	.5
19	9.5	8.5	9.0	8.0	6.5	7.5	3.0	2.5	2.5	.5	.5	.5
20	10.0	9.5	10.0	7.0	6.0	6.5	3.0	2.5	3.0	.5	.5	.5
21	10.5	10.0	10.5	6.5	6.0	6.5	3.5	3.0	3.0	.5	.5	.5
22	11.0	10.5	10.5	7.0	6.0	6.5	3.0	2.5	2.5	1.0	.0	.5
23	11.0	10.0	10.5	6.5	6.0	6.0	2.5	2.0	2.5	1.0	.5	.5
24	10.0	9.0	9.5	7.0	6.0	6.5	2.5	2.0	2.0	.5	.5	.5
25	10.0	8.5	9.5	6.5	5.5	6.0	3.0	2.0	2.5	.5	.5	.5
26	10.5	10.0	10.0	6.0	4.5	5.0	2.5	.0	2.0	1.0	.5	.5
27	12.0	10.5	11.0	4.0	2.5	3.0	1.0	.5	.5	.5	.5	.5
28	13.0	12.0	12.5	2.5	2.0	2.5	.5	.5	.5	.5	.5	.5
29	12.5	11.5	12.0	3.0	2.0	2.5	.5	.5	.5	.5	.5	.5
30	11.5	10.5	11.0	3.5	2.0	3.0	1.0	.5	.5	.5	.5	.5
31	10.5	9.5	10.0	---	---	---	1.0	.5	.5	.5	.5	.5
MONTH	15.5	8.0	11.5	13.5	2.0	8.0	5.0	.0	2.0	2.5	.0	.5

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.5	.5	1.5	.5	1.0	6.0	4.5	5.5	12.5	10.0	11.0
2	.5	.5	.5	1.5	.5	1.0	6.0	5.0	5.5	12.5	9.5	11.0
3	1.5	.5	.5	.5	.0	.5	5.0	3.5	4.0	14.0	10.0	12.0
4	.5	.5	.5	1.0	.0	.5	4.0	3.0	3.5	13.5	10.5	12.0
5	1.0	.0	.5	1.0	.0	.5	4.5	4.0	4.0	11.5	10.0	10.5
6	.5	.5	.5	1.0	.5	.5	5.5	4.0	5.0	10.0	9.5	9.5
7	.5	.0	.5	1.5	.5	1.0	6.0	4.5	5.5	11.0	9.5	10.0
8	.5	.5	.5	1.5	.5	1.0	6.0	5.0	5.5	12.0	10.0	11.0
9	.5	.5	.5	2.0	.5	1.0	5.5	4.5	5.0	14.0	11.5	12.5
10	.5	.5	.5	2.0	.5	1.5	6.5	4.5	5.5	14.0	12.5	13.5
11	.5	.0	.5	3.0	.5	2.0	7.5	6.0	6.5	15.0	12.0	13.5
12	1.0	.0	.5	3.0	2.0	2.5	8.5	7.0	7.5	15.5	13.5	14.5
13	1.0	.5	.5	4.0	1.5	3.0	8.5	7.5	8.0	14.5	14.0	14.0
14	1.0	.5	.5	2.5	1.5	2.0	8.5	7.0	7.5	14.0	13.0	13.5
15	1.0	.5	.5	2.0	1.0	1.5	7.0	6.5	6.5	13.0	12.0	12.5
16	1.0	.5	.5	1.0	.5	1.0	7.0	5.5	6.0	12.0	11.5	12.0
17	1.5	.5	1.0	2.0	.5	1.5	8.0	6.0	6.5	12.0	11.5	12.0
18	1.0	.5	1.0	2.0	.5	1.5	8.5	6.5	7.5	12.0	11.5	12.0
19	1.0	.0	.5	2.5	1.0	1.5	8.0	7.5	7.5	14.0	12.0	13.0
20	1.0	.5	.5	2.5	1.5	2.0	8.0	7.5	8.0	15.5	14.0	14.5
21	1.0	.5	.5	3.5	2.0	3.0	8.0	7.0	7.5	16.5	15.5	16.0
22	1.0	.0	.5	3.5	1.5	2.5	9.0	6.5	8.0	16.0	15.0	15.5
23	1.0	.5	.5	3.5	1.5	2.5	10.0	7.5	9.0	16.0	14.5	15.5
24	1.0	.5	.5	4.0	3.0	3.5	11.5	8.5	10.0	15.5	15.0	15.5
25	1.5	.5	1.0	3.5	2.5	3.0	11.0	9.0	10.0	16.0	14.5	15.0
26	1.5	.5	1.0	2.5	2.0	2.0	12.5	10.5	11.5	18.0	15.0	16.5
27	1.0	.5	.5	3.0	2.0	2.5	11.5	9.0	11.5	20.0	17.0	18.5
28	1.5	.5	1.0	3.5	2.5	3.0	13.0	10.5	11.5	21.0	19.0	20.0
29	---	---	---	4.5	3.0	4.0	13.5	11.0	12.5	22.0	20.0	21.0
30	---	---	---	4.5	3.5	4.0	13.5	11.0	12.5	22.5	20.5	21.5
31	---	---	---	5.0	3.5	4.5	---	---	---	22.0	20.5	21.5
MONTH	1.5	.0	.5	5.0	.0	2.0	13.5	3.0	7.5	22.5	9.5	14.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	20.5	21.5	24.5	21.5	23.0	20.5	19.0	20.0	22.5	20.0	21.0
2	23.0	20.5	22.0	23.5	21.0	22.5	23.0	20.0	21.5	22.5	20.0	21.5
3	22.0	20.0	20.5	22.5	19.5	21.0	24.5	21.5	23.0	23.5	21.0	22.0
4	21.0	19.0	20.0	19.5	18.5	19.0	24.5	23.5	24.0	23.0	21.0	22.0
5	20.0	18.0	19.0	20.5	18.0	19.0	24.0	22.0	23.0	23.0	20.5	22.0
6	20.0	17.5	19.0	22.0	18.5	20.5	24.5	22.5	23.5	23.5	21.0	22.0
7	19.0	17.5	18.0	23.5	20.5	22.0	24.0	22.5	23.5	23.5	22.5	23.0
8	18.5	17.5	18.0	25.5	22.5	24.0	23.5	22.0	22.5	22.5	19.5	21.0
9	20.0	18.5	19.0	26.5	24.0	25.5	24.0	22.5	23.0	20.5	19.0	19.5
10	20.0	18.0	19.0	27.5	25.0	26.5	24.0	22.5	23.0	19.5	17.5	19.0
11	21.0	19.0	20.0	26.0	23.0	25.0	23.5	22.5	23.0	19.5	18.5	19.0
12	22.5	19.5	21.0	24.5	21.5	23.0	24.5	22.5	23.0	20.0	18.5	19.5
13	21.5	19.0	20.5	25.0	21.5	23.5	25.5	23.0	24.0	20.0	18.5	19.5
14	19.0	17.5	18.0	24.0	22.5	23.0	26.0	24.0	25.0	20.0	18.0	19.0
15	19.0	16.5	18.0	25.5	22.5	23.5	27.0	24.0	25.5	19.0	18.0	18.0
16	19.5	17.0	18.5	25.0	23.5	24.5	27.0	25.0	26.0	18.5	17.5	18.0
17	18.5	17.5	18.0	25.0	24.0	24.5	28.0	25.0	26.5	19.0	17.5	18.5
18	21.0	17.0	19.0	25.5	23.0	24.5	27.0	25.0	26.0	19.0	18.0	18.5
19	22.5	19.5	21.0	26.0	23.0	24.5	27.0	24.0	25.5	18.0	17.0	17.5
20	24.0	21.0	22.0	27.0	24.0	25.0	26.5	25.0	25.5	18.5	17.0	18.0
21	24.5	21.5	22.5	26.0	24.0	25.5	26.0	23.5	25.0	20.5	18.0	19.0
22	25.0	21.5	23.0	27.0	25.0	26.0	26.0	23.0	24.5	20.5	19.0	19.5
23	24.5	21.5	23.0	28.0	25.0	27.0	24.5	22.5	24.0	20.0	18.0	19.0
24	24.5	21.0	23.0	28.5	26.5	27.5	24.5	22.5	24.0	19.5	17.5	18.5
25	24.5	21.0	23.0	27.0	24.0	26.0	24.5	21.5	23.0	19.5	18.0	18.5
26	23.5	21.0	22.5	24.5	23.0	23.5	23.0	20.5	21.5	18.5	16.5	17.5
27	25.0	21.0	23.0	24.5	23.0	23.5	23.0	20.5	22.0	17.5	16.0	17.0
28	27.0	23.5	25.0	25.0	23.0	24.0	23.0	22.0	22.0	17.0	16.0	16.5
29	26.0	23.0	24.5	24.5	22.0	23.5	24.0	21.5	22.5	16.5	14.5	15.5
30	25.5	23.0	24.5	24.0	23.0	23.5	23.0	22.0	22.5	16.0	14.0	15.0
31	---	---	---	23.0	20.0	21.0	22.5	20.5	21.5	---	---	---
MONTH	27.0	16.5	21.0	28.5	18.0	23.5	28.0	19.0	23.5	23.5	14.0	19.0

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'44", Sussex County, Hydrologic Unit 02040104, on right bank 0.4 mi (0.6 km) upstream from toll bridge at Montague, 0.8 mi (1.3 km) downstream from Sawkill Creek, and at mile 246.3 (396.3 km). Water-quality samples collected from toll bridge.

DRAINAGE AREA.--3,480 mi² (9,013 km²).

PERIOD OF RECORD.--
WATER DISCHARGE: March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.
CHEMICAL ANALYSES: Water years 1956-73, 1976 to current year.

PERIOD OF DAILY RECORD.--
WATER DISCHARGE: October 1939 to current year.
WATER TEMPERATURES: October 1956 to September 1957.

GAGE.--Water-stage recorder. Datum of gage is 369.93 ft (112.755 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft (21.3 m) lower.

REMARKS.--Discharge records excellent except those for February, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River Basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River Basin, diversions).

COOPERATION.--Field data and samples for laboratory analyses supplied by New Jersey Department of Environmental Protection, Division of Water Resources. Analyses of fecal coliform and fecal streptococci by the MPN method, and selected water phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

AVERAGE DISCHARGE.--39 years, 5,961 ft³/s (168.8 m³/s), unadjusted.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68,100 ft³/s (1,929 m³/s) Jan. 10, gage height, 18.27 ft (5.569 m); minimum daily, 1,320 ft³/s (37.4 m³/s) Sept. 24.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 250,000 ft³/s (7,080 m³/s) Aug. 19, 1955 (gage height, 35.15 ft or 10.714 m), from rating curve extended above 90,000 ft³/s (2,550 m³/s) on basis of flood-routing study; minimum, 382 ft³/s (10.8 m³/s) Aug. 24, 1954, gage height, 3.83 ft (1.167 m); minimum daily, 412 ft³/s (11.7 m³/s) Aug. 23, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage during period 1903-78, 35.5 ft (10.82 m) Oct. 10, 1903, present datum, from floodmark.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6640	4570	9600	6000	12800	2900	23100	3790	4990	1620	2330	1790
2	15600	4250	18300	5800	11300	2800	27900	3290	4700	1540	1620	1830
3	15400	4270	18600	6000	10100	2700	26600	2960	4230	1540	1700	1740
4	10900	3940	16300	5400	8860	3100	22000	2620	4440	1560	1910	1610
5	8030	3390	14000	5200	7090	2400	20400	2960	4220	3860	1900	1670
6	6690	3580	12500	5280	6810	2500	20900	4450	4360	3750	2260	1800
7	6460	3940	11400	5460	6170	3600	20300	4420	4040	2910	3800	1670
8	5310	7400	10000	4910	6800	2900	22700	4160	4700	2330	4730	1770
9	5590	13800	9120	34100	7000	2470	20200	4250	6860	1850	3990	1740
10	12700	12700	8190	52400	6200	2710	17000	6780	6880	1850	3450	1810
11	10800	16500	6600	32800	5400	2670	14700	7150	5240	2030	2810	1790
12	8260	20500	5320	21700	5000	2470	15600	6140	4580	2020	2320	1780
13	6630	16500	5600	16600	4500	2300	16700	5420	4650	1910	1910	1660
14	6030	13100	6600	14300	5500	3770	15500	5010	4750	1760	2520	1550
15	7750	11000	13500	12800	5000	6570	13200	9340	4460	1870	2290	1770
16	11900	9410	19700	11300	5000	10000	10700	10400	3780	1750	2030	1940
17	15200	8240	17200	8610	5000	9530	9570	13600	3200	1750	1780	1820
18	31200	8380	14800	7620	4500	8000	8960	18500	2670	1960	1610	1830
19	23500	7850	13200	7710	3900	7010	7410	22400	2990	2070	1600	2630
20	23800	7020	11800	6420	3500	7470	7410	19400	2950	1980	1570	2610
21	21400	6340	11300	6110	4100	8320	8760	16100	2740	2440	1590	2090
22	16800	5910	13600	5940	4100	16200	8380	14000	2510	2440	1720	2090
23	13900	5680	12000	5230	4200	21000	7300	11200	2810	2000	1730	1640
24	11600	5270	10100	6170	3800	23900	6660	9590	2450	1770	1740	1320
25	10000	5080	8940	6920	3400	19900	6250	11600	1890	2020	1840	1330
26	8480	5970	12100	15400	2500	16000	5460	9880	2020	1700	1910	1360
27	7890	7650	11100	44100	2400	21200	5090	7920	2020	1740	1890	1480
28	7000	6600	10200	30700	3100	36400	4700	6730	2110	1970	1840	1670
29	6070	5910	8600	21600	---	32000	4360	5980	1860	1750	1940	1620
30	5070	5790	7600	16700	---	28900	4050	5530	1720	1760	2080	1950
31	4720	---	7400	14100	---	24800	---	5310	---	2020	1730	---
TOTAL	351320	240540	355270	443380	158030	336490	401860	260880	110820	63520	68140	53360
MEAN	11330	8018	11460	14300	5644	10850	13400	8415	3694	2049	2198	1779
MAX	31200	20500	19700	52400	12800	36400	27900	22400	6880	3860	4730	2630
MIN	4720	3390	5320	4910	2400	2300	4050	2620	1720	1540	1570	1320

CAL YR 1977 TOTAL 2652260 MEAN 7266 MAX 76100 MIN 900
WTR YR 1978 TOTAL 2843610 MEAN 7791 MAX 52400 MIN 1320

01439500 BUSH KILL AT SHOEMAKERS, PA

LOCATION.--Lat 41°05'17", long 75°02'17", Monroe County, Hydrologic Unit 02040104, on right bank 30 ft (9 m) downstream from highway bridge, 0.1 mi (0.2 km) downstream from Saw Creek, 0.7 mi (1.1 km) northwest of Shoemakers, and 2 mi (3.2 km) southwest of Bushkill.

DRAINAGE AREA.--117 mi^2 (303 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1908 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1928, published as Bushkill Creek near Shoemakers; October 1928 to September 1952, published as Bushkill Creek at Shoemakers.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1921, 1932(M), 1933, 1935-36, 1938(M), 1939-40, 1942, 1945, 1946(M), 1948(M). WSP 1302: 1909-15, 1920(M), 1922-29.

GAGE.--Water-stage recorder. Datum of gage is 421.13 ft (128.360 m) National Geodetic Vertical Datum, unadjusted. Sept. 19, 1908 to Aug. 12, 1938, nonrecording gage, and Aug. 13, 1938 to June 20, 1956, water-stage recorder at site 50 ft (15 m) upstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--70 years, 236 ft^3/s (6.684 m^3/s), 27.39 in/yr (696 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,400 ft^3/s (663 m^3/s) Aug. 19, 1955, gage height, 13.95 ft (4.252 m), from floodmarks, from rating curve extended above 2,600 ft^3/s (73.6 m^3/s) on basis of slope-area measurement of peak flow; minimum, 2.6 ft^3/s (0.074 m^3/s) Sept. 25, 26, 27, 1964, gage height, 0.72 ft (0.219 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s (31.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)
Jan. 9	1200	*4,720	134	*6.67	2.033	Mar. 27	2100	2,600	73.6	4.91	1.497
Jan. 26	1800	1,570	44.5	3.83	1.167	May 18	0700	1,310	37.1	3.53	1.076
Mar. 24	2200	1,230	34.8	3.42	1.042	May 31	1900	1,210	34.3	3.40	1.036

Minimum discharge, 13 ft^3/s (0.37 m^3/s) Sept. 15, 16, gage height, 1.03 ft (0.314 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	170	762	301	466	145	1260	144	882	79	36	24
2	533	160	818	277	422	140	1170	138	518	71	36	25
3	409	163	708	301	336	140	985	132	437	77	31	22
4	325	170	619	280	296	140	838	127	469	138	29	18
5	263	174	540	260	280	135	757	157	370	135	35	16
6	233	163	505	240	270	135	657	210	307	110	41	15
7	209	210	446	220	290	135	653	195	287	93	91	14
8	184	466	385	220	310	130	602	181	594	83	286	14
9	275	479	352	3100	290	130	511	272	616	75	181	19
10	396	428	315	2050	277	139	445	272	501	66	127	22
11	305	582	336	1460	263	138	401	229	399	60	103	17
12	258	505	336	1110	230	129	376	210	329	53	88	16
13	223	440	466	890	220	142	336	202	371	47	81	15
14	219	385	358	770	210	262	296	306	330	44	73	14
15	428	347	633	655	200	570	268	540	268	56	56	14
16	422	320	575	554	190	490	250	574	229	68	47	13
17	492	310	486	459	190	417	233	1030	206	60	41	14
18	492	336	466	420	170	354	218	1280	191	58	35	18
19	466	296	453	380	170	334	214	1150	184	46	29	81
20	519	263	397	370	165	359	352	922	163	39	26	62
21	428	246	648	350	160	423	352	764	151	36	24	36
22	380	237	898	340	160	728	291	623	141	34	22	27
23	336	221	685	330	150	946	255	527	127	31	22	27
24	291	218	561	330	150	1170	225	553	116	28	20	27
25	263	210	670	450	150	1120	210	606	105	25	17	24
26	250	363	685	1100	157	1050	198	495	103	24	17	23
27	237	347	526	1290	155	2040	191	417	100	24	16	21
28	225	296	472	1060	148	2260	181	367	95	34	18	20
29	206	268	466	870	---	2030	163	328	91	34	20	19
30	191	277	466	692	---	1740	157	298	93	27	20	17
31	174	---	363	540	---	1430	---	561	---	29	21	---
TOTAL	9846	9050	16396	21669	6475	19501	13045	13810	8773	1784	1689	694
MEAN	318	302	529	699	231	629	435	445	292	57.5	54.5	23.1
MAX	533	582	898	3100	466	2260	1260	1280	882	138	286	81
MIN	174	160	315	220	148	129	157	127	91	24	16	13
CFSM	2.72	2.58	4.52	5.97	1.97	5.38	3.72	3.80	2.50	.49	.47	.20
IN.	3.13	2.88	5.21	6.89	2.06	6.20	4.15	4.39	2.79	.57	.54	.22

CAL YR 1977 TOTAL 97072 MEAN 266 MAX 1790 MIN 13 CFSM 2.27 IN 30.86
WTR YR 1978 TOTAL 122732 MEAN 336 MAX 3100 MIN 13 CFSM 2.87 IN 39.02

01439500 BUSH KILL AT SHOEMAKERS, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, NOVEMBER 1977 TO JULY 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	HARDNESS (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)
NOV 15...	1105	9813	9813	330	40	10	3.2	.5	10
FEB 23...	1215	9813	9813	150	39	14	3.2	1.6	16
MAY 17...	1135	9813	9813	986	48	20	3.2	3.3	10
JUL 27...	1325	9813	9813	24	49	24	4.0	3.8	14

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
NOV 15...	8.0	4.0	56	4	.52	.03	.07	.05	150
FEB 23...	8.0	57	28	--	.54	.02	.07	.09	80
MAY 17...	10	7.0	50	--	.49	.01	.22	.05	170
JUL 27...	15	4.0	22	--	.44	.01	.05	1.1	80

01440090 DELAWARE RIVER NEAR EAST STROUDSBURG, PA (NEAR TOCKS ISLAND DAMSITE)

LOCATION.--Lat 41°02'40", long 75°01'42", Monroe County, Hydrologic Unit 02040104, water-quality recorder on right bank opposite Roxono Island, 0.1 mi (0.2 km) upstream from mouth of Vancampens Brook, and 4.4. mi (7.0 km) northeast of East Stroudsburg.

DRAINAGE AREA.--3,830 mi^2 (9,920 km^2), approximately.

PERIOD OF RECORD.--October 1966 to May 1973, October 1973 to current year.

REMARKS.--Discharge records are obtained from 01440200 Delaware River below Tocks Island damsite near Delaware Water Gap, PA.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)
OCT										
06...	1515	60	6.9	14.5	10.2	50	55	40	--	--
18...	1130	60	7.0	11.0	11.2	15	300	460	52	42
NOV										
03...	1100	95	7.0	12.0	11.2	20	10	20	48	2
16...	1500	63	7.0	9.5	12.2	23	50	K20	42	5
28...	1600	73	6.9	4.5	13.0	24	53	E15	66	--
DEC										
15...	1200	75	6.7	.5	14.8	4	E70	12	59	5
27...	1600	218	6.9	2.0	12.4	10	650	8	137	21
JAN										
11...	1000	67	6.1	1.0	14.8	13	600	15	22	--
FEB										
15...	1100	81	6.8	1.0	13.8	11	1	3	49	--
22...	1030	82	7.3	1.5	12.4	280	1	2	45	--
MAR										
08...	0900	53	7.2	.5	16.0	20	5	--	52	--
21...	1000	63	6.9	5.0	14.0	15	3	7	50	--
APR										
04...	0830	78	7.2	4.0	13.5	10	10	7	40	--
18...	1330	110	6.4	10.5	12.8	25	E1	E1	42	--
MAY										
02...	1600	70	7.4	13.0	12.0	8	--	--	50	--
23...	0730	70	7.4	15.0	10.0	20	100	60	56	--
31...	1315	90	6.9	24.0	8.4	20	15	22	40	--
JUN										
13...	1130	44	7.0	22.0	8.4	15	--	--	50	--
27...	1100	71	7.1	25.5	8.0	15	23	7	56	--
JUL										
11...	1300	80	7.0	24.0	7.6	44	--	--	63	--
24...	1500	71	7.1	29.5	9.3	13	90	E7	50	--
AUG										
08...	1330	65	7.2	26.5	7.6	18	--	--	54	--
25...	0800	65	7.2	24.5	7.0	25	30	10	81	--
SEP										
07...	1400	85	7.7	25.0	9.0	37	10	--	70	--
21...	0915	78	7.1	20.0	9.1	19	223	E13	55	--

01440090 DELAWARE RIVER NEAR EAST STROUDSBURG, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOROPHYLL A PHYTOPLANKTON, UNCORR. (UG/L)	CHLOROPHYLL B PHYTOPLANKTON, UNCORR. (UG/L)
OCT									
06...	--	--	--	--	--	--	8.1	.000	.000
18...	.25	.02	.58	.60	.85	.06	10	4.45	.033
NOV									
03...	.15	.09	.32	.41	.56	.01	8.2	8.12	.451
16...	.27	.03	.27	.30	.57	.04	11	--	--
28...	.32	.03	.27	.30	.62	.02	9.5	1.79	.863
DEC									
15...	.33	.02	.15	.17	.50	.01	9.8	1.48	.174
27...	5.1	.02	.46	.48	5.6	.04	10	.000	.000
JAN									
11...	.44	.08	.67	.75	1.2	.05	14	3.10	.000
FEB									
15...	.49	.04	.04	.08	.57	.02	2.4	.000	.000
22...	.53	.05	.07	.12	.65	.02	2.6	.000	.000
MAR									
08...	.41	.03	.32	.35	.76	.01	4.5	1.03	.760
21...	.41	.06	.25	.31	.72	.03	4.1	1.33	.589
APR									
04...	.36	.03	.18	.21	.57	.00	5.3	2.78	.387
18...	.29	.03	.34	.37	.66	.02	9.3	.000	.000
MAY									
02...	.20	.08	.10	.18	.38	.01	8.5	2.44	.172
23...	.22	.08	.36	.44	.66	.03	8.0	4.83	.909
31...	.10	.10	.31	.41	.51	.03	7.5	2.02	1.93
JUN									
13...	.11	.00	.28	.28	.39	.01	8.8	8.74	1.69
27...	.33	.06	.11	.17	.50	.01	6.0	.000	.000
JUL									
11...	.21	.46	.54	1.0	1.2	.02	1.6	8.52	2.50
24...	.20	.05	.28	.33	.53	.02	4.0	3.13	.008
AUG									
08...	.32	.03	.35	.38	.70	.03	5.3	.000	.000
25...	.12	.15	.85	1.0	1.1	.03	--	22.0	3.38
SEP									
07...	.25	.21	.69	.90	1.2	.03	4.1	2.10	1.30
21...	.34	.09	.38	.47	.81	.01	3.2	.000	.000

DATE	TIME	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)
OCT								
18...	1130	20	0	16	3.2	11	3.9	32
JAN								
11...	1000	7	0	6	8.9	9.9	2.8	31
APR								
04...	0830	17	0	14	1.7	9.0	3.2	0
JUL								
24...	1500	22	0	18	2.8	10	6.0	--

01440200 DELAWARE RIVER BELOW TOCKS ISLAND DAMSITE, NEAR DELAWARE WATER GAP, PA

LOCATION.--Lat 41°00'42", long 75°05'09", Warren County, Hydrologic Unit 02040105, on left bank 40 ft (12 m) streamward from River Road, 1.0 mi (1.6 km) downstream from Tocks Island, 3.7 mi (6.0 km) northeast of Delaware Water Gap, PA, 4.0 mi (6.4 km) upstream from bridge on Interstate Highway 80, and at mile 216.1 (347.7 km).

DRAINAGE AREA.--3,850 mi² (9,970 km²) approximately.

PERIOD OF RECORD.--
WATER DISCHARGE: May 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 293.64 ft (89.501 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Discharge records fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River Basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River Basin, diversions).

AVERAGE DISCHARGE.--14 years, 6,592 ft³/s (186.7 m³/s), unadjusted.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74,100 ft³/s (2,099 m³/s) Jan. 10, maximum gage height, 22.99 ft (7.007 m) Jan. 11, result of ice jam; minimum daily discharge, 1,430 ft³/s (40.5 m³/s) Sept. 27.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) June 30, 1973, gage height, 23.82 ft (7.260 m); minimum daily, 580 ft³/s (16.4 m³/s) July 7, 8, 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8570	5860	8970	7700	14500	3400	27900	4300	6130	1960	2720	1750
2	12900	5580	19200	7000	12500	3200	30400	4000	5440	1780	2010	2040
3	19400	5400	21300	6600	11000	3100	31700	3600	5010	1850	1800	1960
4	13500	5370	18800	6200	9700	3400	26900	3200	4940	2070	1930	1760
5	10200	4550	15800	6000	7900	2900	23800	3500	4840	2840	2150	1690
6	8450	4450	14200	6100	7300	2800	24900	4800	4910	5470	2330	1910
7	7570	4840	13000	6300	6700	3800	23700	5200	4500	3710	2810	1780
8	7170	7850	11700	6000	7150	3400	24700	5010	5220	3040	5530	1800
9	6500	15100	10400	30700	7750	2800	22300	5120	7020	2240	4980	1850
10	11600	15400	9500	66100	7100	3000	18900	6980	8530	2040	3980	1780
11	13900	15900	9130	46600	6300	3000	16300	8020	6450	2330	3380	2010
12	10400	24200	6320	33700	5750	2900	15900	6450	5440	2240	2690	1860
13	8410	19800	7350	23100	5200	2600	17700	6170	5470	2120	1880	2150
14	7530	15700	7450	18600	6100	4200	16800	7660	5440	1960	2100	1750
15	8490	13400	12500	17500	5600	8700	15000	11700	5360	2040	2630	2040
16	13100	11200	21500	15400	5600	11900	12500	14800	4740	1910	2270	2120
17	13300	9620	19800	11800	5600	14300	11100	17900	3920	2040	2150	1960
18	33400	9330	16700	11000	5200	12700	9960	22600	3200	2300	1780	2300
19	27600	9130	15100	9500	4500	11300	8650	24900	3130	2350	1710	3040
20	25800	8170	13500	8600	4000	9220	7980	22500	3550	2210	1680	3500
21	25300	7350	13100	7200	4500	10200	9650	18100	3350	2440	1690	2780
22	20000	6820	15800	7000	4550	17900	9260	15300	3110	2840	1780	2380
23	16200	6640	14700	6900	4700	26800	8650	12700	3040	2300	1690	2180
24	13700	6250	12600	6800	4300	29300	7660	10700	3320	2120	1990	1490
25	12000	5900	10900	7100	4000	27000	7250	12100	2440	2220	1850	1460
26	10500	6360	13100	12000	3100	22800	6740	11400	2150	1830	2070	1730
27	9620	8650	12300	36000	2800	27200	5750	9420	2270	1830	1910	1430
28	8610	7690	12000	39000	3400	43900	5300	7610	2440	1960	2120	2300
29	7850	7070	10000	23000	---	40200	5000	6630	2300	2100	2150	2720
30	6530	6780	8800	19000	---	35900	4700	5960	2040	1800	2270	2900
31	5930	---	9000	16000	---	31000	---	5960	---	2180	2120	---
TOTAL	404030	280360	404520	524500	176800	424820	457050	304290	129700	72120	74150	62420
MEAN	13030	9345	13050	16920	6314	13700	15240	9816	4323	2326	2392	2081
MAX	33400	24200	21500	66100	14500	43900	31700	24900	8530	5470	5530	3500
MIN	5930	4450	6320	6000	2800	2600	4700	3200	2040	1780	1680	1430

CAL YR 1977 TOTAL 3045030 MEAN 8343 MAX 67500 MIN 1200
WTR YR 1978 TOTAL 3314760 MEAN 9082 MAX 66100 MIN 1430

01440272 BUCK HILL CREEK AT BUCK HILL FALLS, PA

LOCATION.--Lat 41°11'31", long 75°17'13", Monroe County, Hydrologic Unit 02040104, on right bank 150 ft (45.7 m) upstream from pumping station at Buck Hill Falls, 0.1 mi (0.2 m) downstream from small tributary on rightbank, and 0.9 mi (1,4 m) upstream from Griscom Creek.

DRAINAGE AREA.--5.76 mi² (9.27 km²).

PERIOD OF RECORD.--January to September 1978.

GAGE.--Water-stage recorder. Altitude of gage is 1,290 ft (393 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,980 ft³/s (141 m³/s) Jan. 9, gage height, 6.26 ft (1.908 m), from floodmarks; minimum daily discharge, 1.9 ft³/s (0.054 m³/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				21	25	10	66	14	21	6.5	4.3	2.7
2				17	23	9.6	80	13	17	6.2	4.0	2.3
3				19	22	9.5	49	13	18	7.8	3.8	2.0
4				18	21	9.4	42	12	17	9.8	3.9	2.0
5				17	19	9.2	50	18	15	7.8	3.9	2.0
6				17	18	9.1	48	17	13	6.5	3.9	2.0
7				17	18	9.1	70	15	15	6.0	7.0	2.0
8				23	17	9.1	65	14	18	5.9	7.7	2.1
9				994	16	9.7	50	27	16	5.7	4.2	2.1
10				330	15	10	44	19	13	5.6	3.4	2.0
11				200	14	10	44	15	12	5.3	2.9	2.0
12				100	14	11	42	14	12	5.3	2.7	2.0
13				74	13	11	36	13	13	5.1	2.9	2.0
14				56	13	20	32	60	12	5.0	2.8	1.9
15				47	12	22	28	80	11	5.1	2.6	2.0
16				43	11	17	25	76	10	5.0	2.6	2.0
17				38	10	15	23	93	9.8	4.9	2.6	2.1
18				34	10	14	22	89	9.6	4.6	2.4	2.1
19				32	10	14	25	66	9.3	4.3	2.4	5.0
20				30	10	15	35	49	8.9	4.0	2.4	3.3
21				29	10	19	31	40	8.7	4.0	2.3	2.7
22				28	10	26	25	32	8.5	4.0	2.2	2.6
23				28	10	28	23	29	8.2	3.9	2.2	2.2
24				27	10	29	21	32	7.8	3.9	2.2	2.1
25				35	10	25	20	32	7.8	3.8	2.2	2.0
26				130	11	27	19	25	7.8	3.9	2.2	2.0
27				89	11	97	18	23	7.6	3.9	2.1	2.0
28				49	11	70	16	20	6.9	3.9	2.2	2.0
29				37	---	59	16	18	6.9	3.8	2.3	2.0
30				32	---	48	15	17	6.7	3.8	2.1	2.0
31				28	---	41	---	22	---	4.5	2.4	---
TOTAL				2639	394	712.7	1080	1007	347.5	159.8	96.8	67.2
MEAN				85.1	14.1	23.0	36.0	32.5	11.6	5.15	3.12	2.24
MAX				994	25	97	80	93	21	9.8	7.7	5.0
MIN				17	10	9.1	15	12	6.7	3.8	2.1	1.9
CFSM				14.8	2.45	3.99	6.25	5.64	2.01	.89	.54	.39
IN.				17.04	2.54	4.60	6.97	6.50	2.24	1.03	.63	.43

01440400 BRODHEAD CREEK NEAR ANALOMINK, PA

LOCATION.--Lat 41°05'05", long 75°12'54", Monroe County, Hydrologic Unit 02040104, on left bank 1.5 mi (2.4 km) upstream from Paradise Creek, 1.6 mi (2.6 km) southeast of Henryville, and 2.3 mi (3.7 km) north of Analomink.

DRAINAGE AREA.--65.9 mi^2 (170.7 km^2).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 586.50 ft (178.765 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1957, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--21 years, 138 ft^3/s (3.908 m^3/s), 28.37 in/yr (721 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s (365 m^3/s) July 28, 1969, gage height, 11.82 ft (3.603 m), from rating curve extended above 1,400 ft^3/s (40 m^3/s) on basis of slope-area measurement of peak flow; minimum, 5.9 ft^3/s (0.17 m^3/s) Sept. 8, 1964; minimum gage height, 1.22 ft (0.372 m) Sept. 18, 19, 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s (31.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 9	0700	*8,270	234	*9.91	3.021	May 14	1900	1,370	38.8	4.99	1.521
Jan. 26	1130	1,690	47.9	5.39	1.643	May 16	2130	1,180	33.4	4.73	1.442
Mar. 27	1230	2,840	80.4	6.55	1.996	May 17	2200	1,120	31.7	4.65	1.417

Minimum discharge, 11 ft^3/s (0.31 m^3/s) Sept. 14, 15, gage height, 1.26 ft (0.384 m)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	94	631	165	240	67	698	101	537	39	26	21
2	274	91	526	150	210	67	686	95	318	36	22	17
3	191	91	405	140	190	67	516	90	270	43	19	15
4	142	124	341	135	180	64	433	86	275	90	22	14
5	113	119	302	125	165	63	422	123	207	65	22	14
6	99	111	283	120	155	61	379	145	172	51	31	13
7	90	201	234	117	145	58	431	128	165	45	56	12
8	81	655	201	163	140	57	410	116	341	42	156	12
9	216	471	188	3670	135	55	334	207	317	36	59	15
10	260	383	172	1240	130	56	292	185	237	33	42	13
11	203	705	160	810	120	56	270	156	192	31	36	13
12	161	467	155	655	115	59	255	141	164	28	34	13
13	134	362	150	517	110	70	226	142	175	26	34	12
14	136	299	180	394	106	201	199	604	159	25	28	11
15	324	254	306	289	106	402	177	819	137	30	24	12
16	280	221	331	240	108	318	161	710	116	31	25	12
17	379	213	277	210	92	253	148	972	102	29	24	13
18	324	216	271	200	89	215	139	996	97	26	22	17
19	310	179	260	190	89	207	148	740	90	23	19	69
20	338	159	224	180	86	228	273	522	83	22	17	32
21	271	148	526	175	86	292	238	414	77	21	17	22
22	282	146	543	170	89	507	193	331	74	20	16	19
23	196	138	394	160	87	617	167	275	67	19	15	19
24	170	140	318	155	80	701	154	303	59	18	15	17
25	154	132	386	170	73	504	143	310	54	17	15	16
26	146	308	365	1150	71	626	135	242	52	17	16	15
27	144	245	292	892	70	2140	129	205	52	18	15	14
28	182	203	251	584	68	1550	122	181	49	20	18	14
29	119	181	215	412	---	1210	113	164	44	18	17	13
30	100	184	206	341	---	976	106	150	42	17	16	13
31	99	---	181	280	---	797	---	289	---	20	17	---
TOTAL	5972	7240	9354	14223	3335	12626	8097	9942	4724	956	895	512
MEAN	193	241	302	459	119	407	270	321	157	30.8	28.9	17.1
MAX	379	705	631	3670	240	2140	698	996	537	90	156	69
MIN	81	91	150	117	68	55	106	86	42	17	15	11
CFSM	2.93	3.66	4.58	6.97	1.81	6.18	4.10	4.87	2.38	.47	.44	.26
IN.	3.37	4.09	5.28	8.03	1.88	7.13	4.57	5.61	2.67	.54	.51	.29

CAL YR 1977 TOTAL 60867 MEAN 167 MAX 1550 MIN 10 CFSM 2.53 IN 34.36
WTR YR 1978 TOTAL 77876 MEAN 213 MAX 3670 MIN 11 CFSM 3.23 IN 43.96

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA

LOCATION.--Lat 40°59'55", long 75°08'35", Monroe County, Hydrologic Unit 02040104, on left bank at Minisink Hills, 500 ft (150 m) upstream from Marshall Creek, 1,500 ft (460 m) downstream from Coates Paper Box Co., 0.8 mi (1.3 km) upstream from mouth, and 3 mi (4.8 km) southeast of East Stroudsburg. Water-quality sampling site 500 ft (150 m) upstream.

DRAINAGE AREA.--259 mi^2 (671 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1950 to current year.

REVISED RECORDS.--WSP 1232: 1951(P).

GAGE.--Nonrecording gage and water-stage recorder. Datum of gage is 301.84 ft (92.001 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1955, water-stage recorder, and Aug. 23 to Nov. 24, 1955, nonrecording gages at site about 1,300 ft (400 m) upstream at datum 2.19 ft (0.668 m) higher. Nov. 25, 1955 to July 24, 1956, nonrecording gage at site 40 ft (12 m) upstream at present datum.

REMARKS.--Records fair except those for periods of no gage-height record, Feb. 1 to Mar. 13, and winter periods, which are poor.

AVERAGE DISCHARGE.--27 years, 566 ft^3/s (16.03 m^3/s), 29.70 in/yr (754 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft^3/s (1,950 m^3/s) Aug. 19, 1955, gage height, 29.9 ft (9.11 m), site and datum then in use, 27.0 ft (8.23 m), present site and datum, from floodmarks, from rating curve extended above 4,600 ft^3/s (130 m^3/s) on basis of computation of flow over dam at gage height 14.43 ft (4.398 m) and slope-area measurement at peak flow, site and datum then in use; minimum, 29 ft^3/s (0.82 m^3/s) Sept. 27, 1964, gage height, 1.12 ft (0.341 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,300 ft^3/s (122 m^3/s) and maximum(*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Dec. 21	1730	4,440	126	5.39	1.643	Mar. 27	1430	8,240	233	7.39	2.252
Jan. 9	0645	*17,800	504	*11.51	3.508	May 14	2200	5,860	166	6.18	1.884
Jan. 26	1230	5,730	162	6.11	1.862	May 16	2245	4,750	135	5.57	1.698

Minimum observed discharge, 73 ft^3/s (2.07 m^3/s) Sept. 14, gage height, 1.42 ft (0.433).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538	397	2440	751	1050	280	2280	412	1130	180	110	122
2	866	388	2020	720	880	280	2190	362	840	166	117	107
3	590	380	1510	639	750	280	1770	341	792	211	114	101
4	460	476	1330	590	690	270	1570	357	824	357	129	90
5	394	460	1190	570	646	260	1510	473	639	262	132	92
6	369	414	1190	544	610	250	1290	584	535	237	132	86
7	340	1190	1080	499	580	250	1370	493	505	210	262	88
8	308	3230	918	767	550	240	1310	473	1050	186	683	86
9	851	2120	775	9480	520	240	1090	824	1390	170	262	137
10	893	1580	611	5380	480	240	994	744	994	163	193	103
11	666	2590	580	2770	460	240	948	618	698	163	163	94
12	559	1690	560	2090	440	260	902	611	604	157	176	92
13	483	1410	530	1780	420	300	808	591	744	151	190	88
14	512	1150	700	1600	390	604	736	2710	618	149	176	84
15	1170	990	1820	1290	370	1760	683	3850	518	143	154	96
16	913	874	1410	1130	360	1680	639	3100	449	190	149	96
17	2020	840	1190	1000	370	1330	570	3680	373	170	137	94
18	1460	936	1270	940	360	1090	551	3740	394	149	135	103
19	1420	743	1240	880	350	1020	584	2880	362	143	116	412
20	1380	690	1030	820	340	1210	1130	2220	320	132	116	215
21	1060	584	2710	770	340	1450	902	1760	296	124	103	151
22	922	604	2650	720	330	2460	760	1450	296	121	101	146
23	807	551	1870	699	320	2780	653	1260	287	119	96	137
24	690	593	1630	674	320	2910	604	1560	262	110	92	117
25	645	506	2130	890	310	2540	570	1510	249	112	98	114
26	607	1260	1800	4220	300	2650	551	1190	230	107	101	96
27	590	918	1370	3660	290	6860	512	1030	222	114	94	96
28	551	799	1170	2460	290	5430	486	927	215	112	157	86
29	486	807	972	1850	---	4120	461	841	204	107	127	92
30	448	768	883	1540	---	3330	424	776	197	101	107	82
31	421	---	815	1200	---	2650	---	752	---	122	119	---
TOTAL	23419	29938	41394	52923	13116	49264	28848	42119	16237	4938	4841	3503
MEAN	755	998	1335	1707	468	1589	962	1359	541	159	156	117
MAX	2020	3230	2710	9480	1050	6860	2280	3850	1390	357	683	412
MIN	308	380	530	499	290	240	424	341	197	101	92	82
CFSM	2.92	3.85	5.15	6.59	1.81	6.14	3.71	5.25	2.09	.61	.60	.45
IN.	3.36	4.30	5.95	7.60	1.88	7.08	4.14	6.05	2.33	.71	.70	.50

CAL YR 1977 TOTAL 244341 MEAN 669 MAX 7720 MIN 70 CFSM 2.58 IN 35.09
WTR YR 1978 TOTAL 310540 MEAN 851 MAX 9480 MIN 82 CFSM 3.29 IN 44.60

01442500 BRODHEAD CREEK AT MINISINK HILLS, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA. NOVEMBER 1977 TO JULY 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)
NOV									
15...	1025	9813	9813	1000	70	24	6.4	2.2	16
FEB									
23...	1100	9813	9813	320	100	46	11	4.9	32
MAY									
17...	1100	9813	9813	4120	60	20	5.6	1.6	14
JUL									
27...	1045	9813	9813	114	100	47	15	2.4	38

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV									
15...	10	8.0	10	0	.86	.04	.07	.09	160
FEB									
23...	10	12	60	--	.90	.03	.14	.12	100
MAY									
17...	12	11	48	--	.80	.02	.25	.07	640
JUL									
27...	20	14	100	--	.82	.02	.09	.15	220

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'36", long 75°05'02", Warren County, Hydrologic Unit 02040105, on left bank at Belvidere, 800 ft (240 m) downstream from Pequest River, and at mile 197.7 (318.1 km).

DRAINAGE AREA.--4,535 mi^2 (11,746 km^2).

PERIOD OF RECORD.--
WATER DISCHARGE: October 1922 to current year.

REVISED DISCHARGE RECORDS.--WSP 781: 1933(M). WSP 951: 1940-41, Drainage area. WSP 1432: 1923, 1924(M).

GAGE.--Water-stage recorder. Datum of gage is 226.43 ft (69.016 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft (61 m) upstream at same datum.

REMARKS.--Discharge records excellent. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River Basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River Basin, diversions).

AVERAGE DISCHARGE.--56 years, 7,963 ft^3/s (225.5 m^3/s), unadjusted.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80,500 ft^3/s (2,280 m^3/s) Jan. 10, gage height, 16.03 ft (4.886 m); minimum, 1,310 ft^3/s (37.1 m^3/s) Sept. 27, gage height, 2.88 ft (0.878 m).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 273,000 ft^3/s (7,730 m^3/s) Aug. 19, 1955 (gage height, 30.21 ft or 9.208 m, from high-water mark in gage house), from rating curve extended above 170,000 ft^3/s (4,810 m^3/s) on basis of flood-routing study; minimum, 609 ft^3/s (17.2 m^3/s) Sept. 28, 29, 1943, gage height, 2.11 ft (0.643 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 10, 1903, reached a stage of 28.6 ft (8.72 m), from floodmark, discharge, 220,000 ft^3/s (6,230 m^3/s) from rating curve extended above 170,000 ft^3/s (4,810 m^3/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9960	6030	23000	10300	17200	4620	31800	5370	9020	2460	2680	2040
2	12500	5670	20000	9060	14900	4360	33100	4960	7940	2310	2500	2060
3	20500	5370	23000	7740	12900	4250	35700	4510	7260	2310	2020	2020
4	15000	5430	21500	7460	11000	3970	29900	4100	7220	2770	2020	1900
5	11700	4790	18500	7360	9420	4000	25700	4050	6980	2830	2460	1750
6	9600	4540	17800	7560	8300	3400	26300	5280	6660	5670	2330	1820
7	8440	5280	15900	7820	8060	4050	24800	6270	6240	4360	3850	1900
8	8120	10500	14300	7780	8060	4570	26900	5940	7500	3610	7380	1850
9	7600	17100	12500	35200	8980	3780	26100	6360	9340	2830	6240	2010
10	12000	17900	11100	73900	8740	3590	22000	7620	10800	2500	5020	1920
11	15700	18000	9420	49600	8220	3730	19100	9540	8660	2540	4280	1970
12	12100	26000	6660	33400	7500	3760	18100	8580	7140	2560	3610	1900
13	9920	22300	7620	25600	6810	3800	19700	7580	7100	2500	3170	1990
14	8800	18100	9020	21400	7180	4930	19000	9060	6980	2370	2820	1770
15	10200	15100	14700	18700	7060	11200	17400	14700	6660	2370	3230	1770
16	14000	13000	24100	16000	6600	14800	14100	17000	6030	2440	2660	1950
17	14900	11400	23800	13200	6980	15300	12200	20900	5190	2500	2480	1990
18	32400	11100	20600	10600	6810	13100	11700	27500	4440	2440	2140	2060
19	29900	10900	19100	10100	6090	11100	10300	32100	4180	2520	1970	3040
20	27100	9860	17000	9260	5040	11200	10200	29100	4620	2520	1900	3710
21	27100	8780	17800	8380	5220	13100	11000	23500	4250	2440	1820	3040
22	21700	8180	21900	8460	5430	19000	11300	19700	4020	2850	1820	2540
23	17800	7940	19900	7860	5520	30300	10200	17200	3800	2680	1920	2440
24	15000	7620	17000	7180	5670	33400	8980	15100	3970	2330	1940	1970
25	12900	7060	15400	9460	5430	31400	8580	16900	3280	2180	1920	1620
26	11200	8620	17400	18300	4650	25800	7660	15800	2870	2200	2040	1590
27	10000	10600	17700	54200	3880	33800	7060	13100	3060	2010	2060	1720
28	9020	9780	14800	44500	4100	53400	6570	10800	2870	2130	2270	1630
29	8260	9020	12400	32400	---	49400	6210	9620	2910	2330	2110	1850
30	6750	13800	10700	29700	---	42800	5760	8660	2680	2040	2180	1840
31	6120	---	11600	19000	---	36500	---	8300	---	2220	2310	---
TOTAL	436290	329770	506220	621480	215750	502410	517420	389200	173670	81880	87150	61660
MEAN	14070	10990	16330	20050	7705	16210	17250	12550	5789	2641	2811	2055
MAX	32400	26000	24100	73900	17200	53400	35700	32100	10800	5670	7380	3710
MIN	6120	4540	6660	7180	3880	3400	5760	4050	2680	2010	1820	1590

CAL YR 1977 TOTAL 3597040 MEAN 9855 MAX 80000 MIN 1470
WTR YR 1978 TOTAL 3922900 MEAN 10750 MAX 73900 MIN 1590

01446550 DELAWARE RIVER NEAR MARTINS CREEK, PA (ROXBURG, NJ)

LOCATION.--Lat 40°47'20", long 75°06'59", Northampton County, at Pennsylvania Railroad crossing 900 ft (274 m) upstream from Oughoughton Creek, 4.7 mi (7.5 km) east of Martins Creek.

DRAINAGE AREA.--4,546 mi² (11,774 km²), approximately.

PERIOD OF RECORD.--July 1969 to current year.

REMARKS.--Operated as part of the USGS-EPA surveillance network.

WATER-QUALITY DATA. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)
OCT										
06...	1300	75	7.0	15.5	9.9	30	45	120	54	--
18...	1300	55	6.9	12.0	K10.9	10	K1500	5900	56	20
NOV										
03...	0930	85	7.4	14.5	10.8	7	50	150	60	3
16...	1330	70	7.5	10.0	12.0	12	40	K20	148	5
28...	1500	100	6.7	4.5	13.2	35	60	E20	107	7
DEC										
15...	1030	82	6.9	2.0	14.7	5	E80	16	47	4
27...	1500	228	6.8	3.0	12.6	10	700	12	137	15
JAN										
11...	1245	95	6.0	3.0	14.0	22	700	20	65	--
FEB										
15...	1330	90	6.7	2.5	14.0	6	1	16	49	--
22...	1200	95	7.4	1.0	11.9	19	3	3	56	--
MAR										
08...	1130	71	7.2	2.5	13.8	40	5	--	72	--
21...	1130	86	7.2	7.0	12.4	20	--	10	65	--
APR										
04...	1030	87	7.4	4.5	13.4	15	20	10	46	--
18...	1500	73	7.2	10.5	12.0	10	E3	E1	54	--
MAY										
02...	1500	107	7.3	15.5	11.7	15	30	5	63	--
23...	1000	88	6.9	17.0	10.1	15	150	--	70	--
31...	1445	110	7.1	25.0	8.8	20	44	21	60	--
JUN										
13...	0945	222	7.2	23.0	10.0	220	--	--	148	--
27...	0900	127	7.5	27.0	8.0	20	133	3	92	--
JUL										
11...	1100	120	7.2	25.5	8.8	36	--	--	139	--
24...	1630	162	7.5	30.0	9.5	19	40	82	101	--
AUG										
08...	1500	107	7.0	26.5	7.8	27	--	--	67	--
24...	1400	107	7.0	25.0	6.8	19	50	15	165	--
SEP										
07...	1230	147	7.6	28.5	8.5	19	25	--	103	--
21...	1100	128	7.0	22.0	9.8	9	E18	K1	70	--

01446550 DELAWARE RIVER NEAR MARTINS CREEK, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLORO-PHYLL A PHYTO-PLANK-TON, UNCORR. (UG/L)	CHLORO-PHYLL B PHYTO-PLANK-TON, UNCORR. (UG/L)
OCT									
06...	.27	.20	.40	.60	.87	.04	7.1	.000	.000
18...	.23	.03	.45	.48	.71	.04	11	3.99	.863
NOV									
03...	.16	.02	.21	.23	.39	.02	6.4	3.22	1.00
16...	2.7	.21	.37	.58	3.3	.15	7.1	.000	.000
28...	.33	.03	.10	.13	.46	.02	7.8	.769	.000
DEC									
15...	.33	.02	.19	.21	.54	.02	14	4.38	.854
27...	4.1	.01	.30	.31	4.4	.04	11	.000	.000
JAN									
11...	.52	.02	.65	.67	1.2	.10	12	4.37	1.22
FEB									
15...	.53	.06	.07	.13	.66	.02	2.6	1.52	1.39
22...	.54	.16	.26	.42	.96	.02	2.2	.000	.000
MAR									
08...	.47	.05	.24	.29	.76	.02	8.0	1.49	.921
21...	.48	.05	.29	.34	.82	.04	3.3	4.45	.247
APR									
04...	.36	.05	.69	.74	1.1	.02	10	1.32	.000
18...	.31	.10	.35	.45	.76	.01	9.2	.000	.000
MAY									
02...	.17	.17	.25	.42	.59	.05	8.7	--	--
23...	.44	.06	.24	.30	.74	.02	9.6	4.30	.000
31...	.14	.11	.32	.43	.57	.03	8.1	4.81	3.42
JUN									
13...	.49	.00	.35	.35	.84	.01	9.5	7.65	1.62
27...	.32	.12	.38	.50	.82	.04	2.2	4.87	.490
JUL									
11...	.43	.27	.41	.68	1.1	.02	5.0	7.44	1.54
24...	.42	.04	.34	.38	.80	.02	1.9	2.24	.000
AUG									
08...	.74	--	--	--	--	.10	6.1	5.41	1.60
24...	.84	.10	.38	.48	1.3	.02	--	9.76	2.70
SEP									
07...	.32	.23	.97	1.2	1.5	.03	3.2	22.4	4.54
21...	.41	.08	.72	.80	1.2	.02	6.0	.000	.000

DATE	TIME	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)
OCT								
18...	1300	15	0	12	3.0	11	3.4	26
JAN								
11...	1245	13	0	11	21	21	4.9	105
APR								
04...	1030	13	0	11	.8	~11	3.5	5
JUL								
24...	1630	65	0	53	3.3	25	7.3	--

01446600 MARTINS CREEK NEAR EAST BANGOR, PA

LOCATION.--Lat 40°54'00", long 75°12'08", Northampton County, Hydrologic Unit 02040105, at right downstream end of bridge on township road, 100 ft (30 m) downstream from confluence of East Fork and West Fork, 1.8 mi (2.9 km) northwest of East Bangor.

DRAINAGE AREA.--10.4 mi² (26.9 km²).

PERIOD OF RECORD.--August 1961 to September 1978 (discontinued).
REVISED RECORDS.--WDR PA-67: 1962, 1964(M), 1965, 1966(M). WDR PA-70: 1969(m).

GAGE.--Water-stage recorder. Datum of gage is 663.92 ft (202.363 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Diversion above station for irrigation.

AVERAGE DISCHARGE.--17 years, 16.8 ft³/s (0.476 m³/s), 21.94 in/yr (557 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) Apr. 2, 1970, gage height, 3.89 ft (1.186 m), from rating curve extended above 260 ft³/s (7.4 m³/s) on basis of contracted-opening and flow over embankment measurements at gage height 3.87 ft (1.180 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 135 ft³/s (3.82 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	Unknown	Unknown		Unknown		Jan. 26	Unknown	*Unknown		*Unknown	
Dec. 1	0945	141	3.99	2.71	0.826	Mar. 15	Unknown	Unknown		Unknown	
Dec. 15	0430	148	4.19	2.74	0.835	Mar. 27	Unknown	Unknown		Unknown	
Dec. 21	1600	266	7.53	3.08	0.939	May 15	0300	161	4.56	2.79	0.850
Jan. 9	0645	327	9.26	3.18	0.969	May 18	0330	148	4.19	2.74	0.835

Minimum daily discharge, 0.56 ft³/s (0.016 m³/s) Aug. 24.
NOTE.--No gage-height record Oct. 10 to Nov. 11, Jan. 23 to Feb. 8, Feb. 14 to Apr. 4 and June 12 to July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.1	110	21	33	6.5	38	4.5	13	1.2	3.2	1.1
2	20	3.1	57	20	29	6.3	34	4.8	12	1.0	1.9	.91
3	9.5	3.5	41	17	25	6.3	30	4.5	14	3.3	1.4	.83
4	6.6	4.7	34	14	22	6.7	28	4.0	18	7.0	1.6	.76
5	5.2	3.5	30	13	20	6.5	29	9.2	12	4.2	2.0	.75
6	4.2	3.1	39	13	18	6.4	26	13	8.8	2.7	1.9	.73
7	3.8	20	30	13	17	6.2	28	8.7	10	1.9	5.9	.72
8	3.3	110	22	31	15	6.0	26	7.7	13	1.6	16	.69
9	32	86	19	222	14	5.9	24	45	14	1.5	2.6	1.6
10	45	70	16	83	14	6.5	22	33	9.0	1.3	1.7	1.2
11	30	60	13	51	13	8.1	21	18	7.3	1.2	1.6	1.0
12	22	53	12	40	12	14	22	13	6.8	1.1	1.5	.88
13	15	48	12	33	11	45	21	11	8.0	1.1	1.7	.72
14	21	43	40	29	11	130	20	54	6.6	1.1	1.6	.60
15	33	37	121	28	10	210	19	120	5.8	1.9	1.4	.70
16	60	33	66	23	9.8	110	19	66	4.9	2.0	1.3	.87
17	90	27	48	19	9.5	48	18	101	4.5	2.8	1.2	.89
18	27	26	51	20	9.2	38	17	122	4.2	2.3	1.1	.90
19	19	20	56	20	8.8	56	11	66	4.0	1.4	1.0	8.0
20	14	17	46	19	8.5	77	27	39	3.5	1.1	.86	5.0
21	12	15	162	19	8.2	72	18	35	4.2	1.0	.70	2.0
22	10	16	111	18	7.8	82	11	32	5.4	.96	.60	1.8
23	8.7	20	71	15	7.6	66	8.7	28	4.4	.97	.60	1.7
24	7.5	21	57	15	7.4	53	8.7	45	3.3	.99	.56	1.5
25	6.8	18	92	14	7.1	40	8.2	36	2.8	.75	.64	1.2
26	6.4	53	65	450	6.9	90	6.3	27	2.6	.80	.60	1.0
27	6.2	36	43	170	6.8	220	5.9	23	2.1	.91	1.0	.91
28	5.3	27	35	84	6.6	98	6.3	19	1.7	2.1	5.5	.91
29	4.3	24	28	60	---	64	5.5	17	1.5	1.3	2.3	.91
30	3.8	27	26	46	---	47	4.5	15	1.3	1.3	1.2	.91
31	3.4	---	23	39	---	42	---	16	---	4.2	1.2	---
TOTAL	538.5	928.0	1576	1659	368.2	1671.4	563.1	1035.4	208.7	56.98	66.36	41.69
MEAN	17.4	30.9	50.8	53.5	13.2	53.9	18.8	33.4	6.96	1.84	2.14	1.39
MAX	90	110	162	450	33	220	38	122	18	7.0	16	8.0
MIN	3.3	3.1	12	13	6.6	5.9	4.5	4.0	1.3	.75	.56	.60
CFSM	1.67	2.97	4.88	5.14	1.27	5.18	1.81	3.21	.67	.18	.21	.13
IN.	1.93	3.32	5.63	5.93	1.32	5.98	2.01	3.70	.75	.20	.24	.15

CAL YR 1977 TOTAL 7083.66 MEAN 19.4 MAX 333 MIN .32 CFSM 1.87 IN 25.34
WTR YR 1978 TOTAL 8711.33 MEAN 23.9 MAX 450 MIN .56 CFSM 2.30 IN 31.16

01446700 DELAWARE RIVER AT EASTON, PA

LOCATION.--Lat 40°42'43", long 75°11'48", Northampton County, Hydrologic Unit 02040105, on right bank 200 ft (61 m) upstream from city of Easton pumping station, 1.2 mi (1.9 km) upstream from Bushkill Creek at Easton.

DRAINAGE AREA.--4,636 mi^2 (12,007 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to December 1977 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 157.84 ft (48.110 m) City of Easton, Pa. datum.

REMARKS.--Records good. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack (see p. 32) and by Cannonsville, Pepacton, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs about 100 mi (161 km) upstream (see New York Annual Report) and smaller reservoirs. Diversion from Cannonsville, Pepacton, and Neversink Reservoirs (see New York Annual Report).

AVERAGE DISCHARGE.--10 years (water years 1968-77), 9,016 ft^3/s (255.3 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 100,000 ft^3/s (2,830 m^3/s) Dec. 22, 1973; minimum, 1,640 ft^3/s (46.4 m^3/s) Aug. 16, 1971; minimum gage height, 3.68 ft (1.122 m) Jan. 31, Feb. 1, July 29, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1977 to December 1977, 39,100 ft^3/s (1,110 m^3/s) Oct. 18, gage height, 14.57 ft (4.441 m); minimum, 4,890 ft^3/s (138 m^3/s) Nov. 6, gage height, 5.48 ft (1.670 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9870	6560										
2	10500	6190										
3	21000	5860										
4	15800	5930										
5	11700	5350										
6	9310	4990										
7	8100	5690										
8	7810	11100										
9	7230	17700										
10	10800	18900										
11	16300	18700										
12	12100	26400										
13	9740	23200										
14	8480	18800										
15	9660	15700										
16	13500	13600										
17	16000	12000										
18	31100	11600										
19	31700	11400										
20	28200	10300										
21	28600	9310										
22	23200	8740										
23	18900	8450										
24	15800	8230										
25	13500	7700										
26	11900	9040										
27	10600	11000										
28	9670	10600										
29	8830	9630										
30	7480	9060										
31	6750	---										
TOTAL	444130	341730										
MEAN	14330	11390										
MAX	31700	26400										
MIN	6750	4990										

01446700 DELAWARE RIVER AT EASTON, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1947 to September 1951, October 1957 to September 1958, October 1963 to September 1964, November 1967 to June 1978 (discontinued)

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1967 to June 1978 (discontinued).
pH: November 1967 to June 1978 (discontinued).
WATER TEMPERATURES: October 1947 to September 1949, October 1957 to September 1958, October 1963 to September 1964, November 1967 to June 1978 (discontinued).
DISSOLVED OXYGEN: November 1967 to June 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 499 micromhos Nov. 26, 1970; minimum, 40 micromhos Apr. 6, 1970.
pH: Maximum, 9.8 May 16, 1970; minimum, 5.7 May 24, 1970.
WATER TEMPERATURES: Maximum, 30.0°C July 18, 1968, July 28-29, 1970; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 18.1 mg/L Jan. 21, 1975; minimum, 4.8 mg/L July 9, 1975.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 225 micromhos Mar. 28; minimum, 56 micromhos May 19.
pH: Maximum, 8.7 May 3; minimum, 6.6 Oct. 18-20.
WATER TEMPERATURES: Maximum, 24.0°C May 31; minimum, 0.5°C on many days during January, February, and March.
DISSOLVED OXYGEN: Maximum, 14.7 mg/L Mar. 13; minimum, 8.2 mg/L May 31.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	112	97	101	102	100	101	123	113	118	147	129	136
2	111	91	104	104	101	103	113	91	98	135	124	129
3	104	87	96	108	103	105	122	91	98	135	125	130
4	---	---	---	105	104	104	118	90	98	134	123	127
5	---	---	---	110	105	107	140	107	122	133	122	128
6	90	87	89	111	110	110	126	107	115	127	88	104
7	91	87	90	116	108	111	126	112	119	91	85	87
8	92	89	91	115	106	111	122	114	119	95	84	87
9	108	93	99	123	101	109	146	120	127	---	---	---
10	115	96	108	154	101	131	150	137	143	---	---	---
11	94	88	90	131	109	118	156	137	144	---	---	---
12	93	90	92	143	104	122	161	122	138	---	---	---
13	93	86	90	141	129	134	134	113	125	---	---	---
14	95	89	91	130	124	126	122	114	119	---	---	---
15	101	96	99	125	121	123	122	101	115	---	---	---
16	101	82	92	92	88	90	103	90	97	---	---	---
17	88	82	85	98	91	93	99	96	97	---	---	---
18	102	66	79	101	96	99	102	95	98	107	94	98
19	67	62	64	103	98	100	---	---	---	---	---	---
20	74	67	71	105	99	101	---	---	---	---	---	---
21	88	73	80	106	102	104	---	---	---	---	---	---
22	86	79	82	110	104	106	73	66	69	---	---	---
23	91	83	88	112	104	108	73	62	68	---	---	---
24	95	91	93	116	111	113	88	62	66	---	---	---
25	106	94	98	116	113	115	---	---	---	90	82	85
26	110	90	98	123	112	117	---	---	---	107	85	92
27	97	92	94	122	106	113	---	---	---	113	69	87
28	97	93	94	114	108	111	125	119	122	84	57	75
29	97	92	94	119	108	113	131	121	127	96	72	81
30	99	96	98	119	113	116	144	129	136	96	75	87
31	101	99	100	---	---	---	140	129	135	89	82	---
MONTH	115	62	91	154	88	110	161	62	113	147	57	102

01446700 DELAWARE RIVER AT EASTON, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	151	128	137	---	---	---	102	99	101
2	---	---	---	153	117	130	---	---	---	107	101	105
3	88	84	86	123	117	119	---	---	---	111	106	109
4	92	83	88	125	116	121	---	---	---	115	109	113
5	96	87	93	123	118	120	---	---	---	121	114	118
6	98	92	96	133	118	125	---	---	---	121	109	117
7	99	95	97	134	123	129	---	---	---	108	96	101
8	102	96	99	126	115	117	---	---	---	98	94	97
9	100	91	96	125	116	120	---	---	---	105	95	100
10	97	91	94	128	108	117	---	---	---	107	89	100
11	98	92	95	112	106	109	---	---	---	88	79	82
12	101	96	99	115	109	112	82	79	81	83	80	81
13	106	97	100	125	113	118	82	78	79	86	81	84
14	103	98	101	132	124	128	80	77	79	90	85	87
15	102	96	99	127	112	120	83	78	80	85	72	79
16	104	96	100	113	92	103	87	82	85	73	70	72
17	102	98	100	94	90	92	90	86	88	74	67	70
18	99	95	97	98	92	95	91	88	90	167	68	95
19	103	95	99	104	95	99	99	92	95	211	56	143
20	108	99	103	109	100	104	105	98	102	85	66	74
21	113	105	108	106	102	104	104	96	100	100	76	83
22	106	101	104	106	80	95	96	93	94	90	77	82
23	128	100	117	96	78	85	97	94	96	92	78	85
24	124	120	122	170	86	95	101	97	99	106	83	94
25	126	121	124	199	159	179	101	78	91	106	89	101
26	132	124	127	197	140	179	89	83	86	103	84	96
27	142	132	137	166	118	139	93	89	91	106	96	101
28	145	138	141	225	135	156	94	92	93	113	100	105
29	---	---	---	220	163	186	97	94	95	112	104	108
30	---	---	---	177	165	172	101	97	98	113	107	110
31	---	---	---	---	---	---	---	---	---	114	108	111
MONTH	145	83	105	225	78	124	105	77	91	211	56	97

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	113	103	108									
2	111	104	108									
3	---	---	---									
4	---	---	---									
5	---	---	---									
6	---	---	---									
7	---	---	---									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	113	103	108									

01446700 DELAWARE RIVER AT EASTON, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.9	6.8	6.9	7.6	7.1	7.3	7.3	7.1	7.2	7.3	7.2	7.2
2	7.0	6.9	6.9	7.4	7.1	7.2	7.2	7.0	7.0	7.3	7.2	7.3
3	6.9	6.8	6.9	7.4	7.1	7.2	7.0	6.9	7.0	7.4	7.2	7.3
4	---	---	---	7.9	7.1	7.4	7.0	6.9	6.9	7.4	7.3	7.3
5	---	---	---	7.4	7.1	7.2	7.0	7.0	7.0	7.4	7.3	7.3
6	7.0	6.9	6.9	7.4	7.1	7.2	7.0	6.8	7.0	7.3	7.2	7.3
7	7.1	6.9	7.0	7.3	7.1	7.2	7.1	7.0	7.0	7.3	7.2	7.3
8	7.1	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.0	7.3	7.2	7.2
9	7.1	7.0	7.0	7.0	6.9	7.0	7.1	7.0	7.1	7.4	7.2	7.3
10	7.2	7.0	7.1	7.2	6.9	7.0	7.1	7.0	7.1	---	---	---
11	7.0	6.9	6.9	7.1	7.0	7.0	7.1	7.0	7.1	7.0	6.9	6.9
12	7.1	6.9	7.0	7.1	7.0	7.1	7.2	7.1	7.2	6.9	6.8	6.9
13	7.1	6.9	7.0	7.2	7.1	7.1	7.2	7.1	7.2	6.9	6.9	6.9
14	7.1	6.9	7.0	7.2	7.1	7.1	7.1	7.0	7.1	7.0	6.9	7.0
15	7.3	7.0	7.1	7.2	7.1	7.1	7.1	7.0	7.1	7.1	7.0	7.0
16	7.1	6.9	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.1	7.0	7.1
17	6.9	6.9	6.9	7.1	6.9	7.0	6.9	6.9	6.9	7.1	7.1	7.1
18	6.9	6.6	6.8	7.2	7.0	7.1	6.9	6.9	6.9	7.1	7.0	7.0
19	6.7	6.6	6.6	7.2	7.0	7.1	---	---	---	---	---	---
20	6.8	6.6	6.7	7.2	7.0	7.1	---	---	---	---	---	---
21	6.8	6.7	6.8	7.1	7.0	7.1	---	---	---	---	---	---
22	6.9	6.7	6.8	7.2	7.0	7.1	7.1	7.0	7.0	---	---	---
23	7.0	6.8	6.9	7.1	7.1	7.1	7.1	7.0	7.0	---	---	---
24	7.0	6.9	6.9	7.3	7.1	7.2	7.1	7.0	7.0	---	---	---
25	7.1	6.9	7.0	7.3	7.1	7.2	7.2	7.0	7.1	7.1	7.1	7.1
26	7.0	6.9	7.0	7.3	7.1	7.2	---	---	---	7.3	7.0	7.1
27	7.1	6.9	7.0	7.3	7.1	7.2	---	---	---	7.1	6.8	6.9
28	7.2	6.9	7.0	7.2	7.1	7.2	7.3	7.2	7.3	6.9	6.8	6.8
29	7.3	7.0	7.1	7.2	7.0	7.1	7.2	7.2	7.2	7.0	6.9	6.9
30	7.4	7.0	7.2	7.2	7.1	7.1	7.2	7.2	7.2	7.0	6.9	6.9
31	7.5	7.1	7.2	---	---	---	7.2	7.2	7.2	6.9	6.9	---
MONTH	7.5	6.6	7.0	7.9	6.9	7.1	7.3	6.8	7.1	7.4	6.8	7.1

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.4	7.1	7.2	---	---	---	8.6	7.3	8.0
2	---	---	---	7.4	7.1	7.2	---	---	---	8.6	7.3	8.0
3	7.0	6.9	7.0	7.3	7.1	7.2	---	---	---	8.7	7.2	8.1
4	7.0	6.9	7.0	7.5	7.1	7.3	---	---	---	8.6	7.4	8.0
5	7.0	6.9	7.0	7.5	7.2	7.3	---	---	---	7.7	7.2	7.4
6	7.0	7.0	7.0	7.7	7.2	7.4	---	---	---	7.5	7.1	7.3
7	7.0	7.0	7.0	7.8	7.2	7.4	---	---	---	8.2	7.1	7.5
8	7.1	7.0	7.1	7.5	7.1	7.3	---	---	---	7.8	7.1	7.4
9	7.1	7.0	7.0	7.8	7.1	7.4	---	---	---	7.9	7.0	7.3
10	7.0	7.0	7.0	8.1	7.2	7.5	---	---	---	7.9	7.1	7.4
11	7.1	7.0	7.0	8.1	7.2	7.6	---	---	---	7.9	7.0	7.4
12	7.1	7.0	7.0	8.2	7.3	7.7	7.0	6.9	7.0	7.9	6.9	7.3
13	7.1	7.0	7.1	8.3	7.3	7.7	7.1	6.8	6.9	7.3	7.0	7.1
14	7.1	7.0	7.1	7.5	7.3	7.4	7.0	6.8	6.9	7.1	6.9	7.0
15	7.1	7.0	7.1	7.3	7.1	7.2	7.1	6.8	6.9	6.9	6.8	6.8
16	7.1	6.8	7.0	7.1	6.9	7.0	7.2	6.8	7.0	6.8	6.8	6.8
17	7.0	6.9	7.0	7.0	6.9	6.9	7.2	6.9	7.0	6.8	6.8	6.8
18	7.0	6.9	7.0	7.1	6.9	7.0	7.4	6.9	7.1	6.9	6.8	6.8
19	7.1	6.9	7.0	7.2	6.9	7.1	7.1	6.9	7.0	7.0	6.7	6.9
20	7.1	7.0	7.0	7.3	7.0	7.2	7.3	6.9	7.1	6.8	6.7	6.8
21	7.2	7.0	7.1	7.3	7.0	7.2	7.3	6.9	7.1	6.9	6.8	6.8
22	7.1	7.0	7.1	7.1	6.9	7.0	7.5	6.9	7.2	7.0	6.8	6.9
23	7.2	7.0	7.1	6.9	6.7	6.8	7.7	7.0	7.3	7.0	6.8	6.9
24	7.2	7.0	7.1	6.9	6.7	6.8	7.8	7.0	7.3	6.9	6.9	6.9
25	7.2	7.0	7.1	7.0	6.9	6.9	8.3	7.0	7.5	7.0	6.9	6.9
26	7.3	7.0	7.1	7.0	6.9	6.9	8.4	7.1	7.7	7.1	6.9	7.0
27	7.4	7.1	7.2	6.9	6.8	6.9	8.3	7.2	7.7	7.1	6.9	7.0
28	7.5	7.1	7.3	7.1	6.8	6.9	8.4	7.2	7.8	7.2	6.9	7.1
29	---	---	---	7.0	6.9	6.9	8.5	7.2	7.9	7.4	7.0	7.2
30	---	---	---	7.0	6.9	6.9	8.6	7.2	8.0	7.8	7.0	7.3
31	---	---	---	---	---	---	---	---	---	7.9	7.0	7.4
MONTH	7.5	6.8	7.1	8.3	6.7	7.2	8.6	6.8	7.3	8.7	6.7	7.2

01446700 DELAWARE RIVER AT EASTON, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.0	7.4									
2	7.1	7.0	7.0									
3	---	---	---									
4	---	---	---									
5	---	---	---									
6	---	---	---									
7	---	---	---									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	7.9	7.0	7.2									

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.0	16.5	17.0	12.5	11.5	12.0	7.0	5.5	6.0	2.5	2.0	2.5
2	17.0	16.5	17.0	12.5	12.0	12.5	6.5	5.5	6.0	2.5	2.0	2.5
3	16.5	15.5	16.0	13.5	12.5	13.0	6.0	5.0	5.5	2.5	1.5	2.0
4	---	---	---	14.5	13.5	14.0	5.5	5.0	5.5	2.5	1.5	2.0
5	---	---	---	15.0	14.5	14.5	5.5	5.0	5.5	2.5	2.0	2.5
6	15.0	14.5	14.5	15.0	14.5	15.0	4.5	4.0	4.5	3.0	2.5	3.0
7	14.5	14.0	14.5	15.0	14.0	14.5	4.0	3.5	4.0	3.0	2.5	2.5
8	14.0	13.5	13.5	14.0	13.0	13.5	3.5	3.0	3.0	4.0	2.5	3.0
9	14.5	13.5	14.0	13.0	12.5	13.0	3.5	3.0	3.5	---	---	---
10	14.0	13.0	13.5	13.0	12.5	13.0	3.0	2.5	2.5	---	---	---
11	13.5	12.5	13.0	13.0	11.5	12.0	2.5	2.0	2.0	1.5	1.5	1.5
12	14.0	13.0	13.5	11.5	10.5	10.5	2.0	1.0	1.5	1.5	1.0	1.5
13	13.5	13.0	13.5	10.5	9.0	9.5	2.5	2.0	2.5	1.5	1.5	1.5
14	13.5	12.0	12.5	9.0	8.0	8.5	3.0	2.0	2.5	1.5	1.5	1.5
15	12.5	11.5	12.0	9.0	8.0	8.5	2.5	2.0	2.5	2.0	1.5	1.5
16	12.0	11.5	12.0	9.0	7.5	8.5	3.0	1.5	2.5	2.0	1.5	1.5
17	12.0	10.5	11.0	10.0	8.5	9.5	3.5	2.5	3.0	2.0	1.5	2.0
18	10.5	9.5	10.0	10.0	9.5	9.5	4.0	3.5	3.5	3.0	2.0	2.5
19	9.5	9.5	9.5	9.5	8.5	9.0	---	---	---	---	---	---
20	10.5	9.5	10.0	8.5	8.0	8.0	---	---	---	---	---	---
21	11.5	10.5	11.0	8.5	8.0	8.0	---	---	---	---	---	---
22	11.5	11.0	11.5	8.5	8.5	8.5	4.0	4.0	4.0	---	---	---
23	12.0	11.0	11.5	8.5	8.0	8.5	4.0	4.0	4.0	---	---	---
24	11.5	11.0	11.5	9.0	8.0	8.5	5.0	3.5	4.0	---	---	---
25	11.5	10.5	11.0	8.5	8.0	8.0	---	---	---	2.0	1.5	2.0
26	12.0	11.0	11.5	8.0	7.0	7.5	---	---	---	2.5	1.5	2.0
27	13.0	12.0	12.5	7.0	5.5	6.0	---	---	---	1.5	.5	1.0
28	14.0	13.0	13.5	6.0	5.0	5.5	1.5	1.5	1.5	1.5	1.0	1.0
29	14.0	13.5	14.0	5.0	4.5	5.0	2.0	1.5	1.5	1.5	1.0	1.0
30	13.5	12.5	13.0	5.5	5.0	5.5	2.5	1.5	2.0	2.0	1.0	1.5
31	13.0	11.5	12.5	---	---	---	3.0	2.0	2.5	1.5	1.5	---
MONTH	17.0	9.5	13.0	15.0	4.5	10.0	7.0	1.0	3.5	4.0	.5	2.0

01446700 DELAWARE RIVER AT EASTON, PA--Continued

TEMPERATURE ($^{\circ}C$) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	2.5	2.0	2.5	---	---	---	15.0	13.0	14.0
2	---	---	---	2.5	1.5	2.0	---	---	---	15.0	13.0	14.0
3	2.0	1.0	1.5	2.5	1.0	1.5	---	---	---	16.0	13.5	14.5
4	1.5	.5	1.0	2.5	.5	1.5	---	---	---	15.0	14.0	14.5
5	1.0	.5	1.0	2.0	.5	1.5	---	---	---	14.0	13.0	13.5
6	1.0	.5	.5	2.5	1.0	1.5	---	---	---	13.0	12.0	12.5
7	1.5	.5	1.0	3.5	1.5	2.5	---	---	---	13.5	12.0	12.5
8	2.0	.5	1.5	2.5	2.0	2.0	---	---	---	12.5	11.5	12.0
9	2.0	.5	1.5	3.0	2.0	2.5	---	---	---	14.0	12.5	13.0
10	2.0	.5	1.5	3.5	3.0	3.5	---	---	---	14.5	13.5	14.0
11	2.0	.5	1.5	4.0	2.5	3.5	---	---	---	16.0	14.0	15.0
12	2.0	1.0	1.5	4.0	3.0	3.5	10.0	9.5	9.5	16.5	15.5	16.0
13	2.5	1.0	2.0	4.5	2.5	3.5	10.5	9.5	10.0	16.0	16.0	16.0
14	2.5	1.5	2.0	4.5	3.5	4.0	10.0	9.5	10.0	15.5	15.0	15.5
15	2.5	1.0	2.0	4.0	3.5	3.5	9.5	8.5	9.0	15.0	13.5	14.0
16	2.5	1.0	2.0	3.5	2.0	2.5	8.5	7.5	8.0	13.5	12.5	13.0
17	2.5	1.5	2.0	3.0	1.5	2.0	8.5	7.5	8.0	12.5	12.5	12.5
18	2.0	1.0	1.5	3.5	2.0	2.5	9.5	7.5	8.5	13.0	12.0	12.5
19	2.0	1.0	1.5	4.0	2.5	3.5	9.5	9.0	9.0	14.5	13.0	13.5
20	2.0	.5	1.0	5.0	3.5	4.5	10.0	9.0	9.5	16.0	14.0	15.0
21	2.0	1.0	1.5	5.5	4.5	5.0	9.5	9.0	9.5	17.5	16.0	16.5
22	2.0	.5	1.5	6.0	5.0	5.5	10.5	8.5	9.5	18.0	16.5	17.5
23	2.5	1.0	1.5	5.5	4.0	4.5	11.0	9.5	10.5	18.0	17.0	17.5
24	2.5	1.0	2.0	5.0	4.0	4.5	11.5	10.5	11.0	17.5	16.5	17.0
25	2.5	1.5	2.0	5.0	4.5	5.0	13.0	11.0	12.0	17.0	16.0	16.5
26	2.5	2.0	2.5	4.5	4.0	4.5	13.5	12.5	13.0	18.5	16.5	17.5
27	3.0	1.5	2.5	4.5	3.5	4.0	13.0	12.0	12.5	19.0	18.0	18.5
28	3.0	1.5	2.5	5.5	4.5	5.0	14.0	11.5	13.0	21.0	19.0	20.0
29	---	---	---	6.5	5.5	6.0	15.0	12.5	13.5	22.0	20.5	21.0
30	---	---	---	6.0	6.0	6.0	15.0	13.5	14.5	23.0	21.5	22.0
31	---	---	---	---	---	---	---	---	---	24.0	22.5	23.5
MONTH	3.0	.5	1.5	6.5	.5	3.5	15.0	7.5	10.5	24.0	11.5	15.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	23.0	23.0									
2	23.0	22.0	22.5									
3	---	---	---									
4	---	---	---									
5	---	---	---									
6	---	---	---									
7	---	---	---									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	23.5	22.0	23.0									

01446700 DELAWARE RIVER AT EASTON, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.5	9.2	9.4	11.6	10.8	11.1	12.7	12.1	12.5	13.6	13.0	13.3
2	9.4	9.1	9.3	11.2	10.7	10.9	12.4	12.1	12.3	13.8	13.2	13.4
3	9.4	9.2	9.3	11.2	10.6	10.8	12.3	11.8	12.2	13.6	12.9	13.3
4	---	---	---	11.4	10.4	11.0	12.3	11.9	12.2	13.9	13.0	13.5
5	---	---	---	10.5	9.7	10.2	12.2	11.7	12.0	14.1	13.2	13.7
6	10.2	10.2	10.2	---	---	---	12.3	12.1	12.2	14.2	13.5	13.8
7	10.6	10.1	10.3	---	---	---	12.7	12.2	12.5	13.8	13.4	13.5
8	10.6	10.3	10.4	10.3	10.2	10.2	13.2	12.7	12.9	13.8	13.4	13.6
9	10.4	10.2	10.3	10.4	10.0	10.3	13.0	12.6	12.8	14.0	13.6	13.8
10	10.6	10.2	10.4	10.2	9.5	9.8	13.2	12.6	12.9	---	---	---
11	10.7	10.4	10.6	10.2	9.7	10.0	13.3	12.8	13.1	13.2	12.9	13.0
12	10.6	10.4	10.5	10.4	10.1	10.3	14.3	13.2	13.7	13.1	12.7	12.9
13	11.0	10.3	10.5	---	---	---	14.2	13.9	14.1	13.1	12.9	13.0
14	10.8	10.5	10.6	---	---	---	14.0	13.7	13.8	12.9	12.7	12.8
15	11.0	10.4	10.7	---	---	---	13.7	13.6	13.7	12.9	12.6	12.8
16	11.0	10.5	10.8	12.1	11.7	11.9	13.8	13.5	13.7	12.8	12.1	12.6
17	11.0	10.4	10.6	11.7	11.1	11.4	13.6	13.5	13.5	13.1	12.6	12.9
18	11.1	10.5	11.0	11.4	11.1	11.2	---	---	---	13.2	12.8	13.0
19	11.3	10.5	11.0	11.7	11.2	11.5	---	---	---	---	---	---
20	11.2	11.1	11.2	12.2	11.6	11.9	---	---	---	---	---	---
21	11.0	10.8	10.9	12.0	11.7	11.9	---	---	---	---	---	---
22	11.0	10.7	10.9	12.1	11.7	11.9	---	---	---	---	---	---
23	11.0	10.7	10.8	11.8	11.6	11.7	---	---	---	---	---	---
24	11.2	10.7	11.0	12.2	11.6	11.8	---	---	---	---	---	---
25	11.4	11.0	11.1	12.2	11.6	11.8	---	---	---	13.4	13.2	13.3
26	11.2	10.5	11.0	11.9	11.5	11.7	---	---	---	13.2	10.9	12.7
27	11.0	10.6	10.8	12.6	11.7	12.2	---	---	---	12.4	10.8	11.7
28	10.8	10.3	10.5	12.9	12.3	12.6	13.4	13.1	13.3	12.0	11.7	11.9
29	10.8	10.2	10.5	13.2	12.7	13.0	13.6	13.0	13.3	12.0	11.7	11.8
30	11.0	10.3	10.6	13.0	12.8	12.9	13.9	13.1	13.6	12.1	11.5	11.9
31	11.3	10.6	10.9	---	---	---	13.9	13.3	13.6	11.5	11.4	---
MONTH	11.4	9.1	10.6	13.2	9.5	11.4	14.3	11.7	13.0	14.2	10.8	13.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.1	12.0	12.5	---	---	---	---	---	---
2	---	---	---	13.2	11.9	12.6	---	---	---	---	---	---
3	13.0	12.5	12.9	12.4	11.7	12.1	---	---	---	13.3	10.5	12.0
4	12.9	12.4	12.6	12.9	11.4	12.1	---	---	---	12.5	9.6	11.0
5	12.6	12.3	12.5	12.8	11.5	12.1	---	---	---	10.5	9.3	9.9
6	12.5	12.1	12.2	13.4	11.6	12.4	---	---	---	10.4	9.3	9.8
7	12.5	12.0	12.2	13.9	11.8	12.7	---	---	---	11.7	9.4	10.4
8	12.6	11.8	12.3	12.9	12.1	12.5	---	---	---	10.9	9.5	10.1
9	12.8	11.5	12.3	13.7	12.1	12.8	---	---	---	11.2	9.4	10.1
10	12.8	12.0	12.4	14.0	12.4	13.0	---	---	---	11.1	9.4	10.3
11	12.7	12.0	12.4	14.5	12.0	13.1	---	---	---	11.7	9.6	10.6
12	12.8	12.1	12.4	14.4	12.3	13.2	11.9	11.4	11.7	11.7	9.9	10.8
13	12.8	12.1	12.4	14.7	12.2	13.3	12.0	11.1	11.5	10.6	9.9	10.2
14	12.7	12.1	12.4	12.9	12.2	12.6	11.8	11.1	11.4	10.2	9.5	9.8
15	12.8	11.9	12.4	12.4	11.9	12.2	11.7	10.9	11.2	9.6	9.3	9.4
16	12.9	11.9	12.4	12.2	11.7	11.8	11.6	10.6	11.1	9.5	9.4	9.4
17	12.9	12.3	12.6	12.4	11.4	11.9	11.6	10.6	11.1	9.5	9.2	9.4
18	12.5	12.1	12.3	12.0	10.6	11.5	12.2	10.7	11.4	9.5	8.9	9.3
19	12.7	11.8	12.2	12.2	10.7	11.5	11.6	11.1	11.3	9.9	8.6	9.1
20	12.6	11.7	12.1	12.4	11.0	11.7	12.0	11.1	11.4	10.2	9.5	9.8
21	12.6	11.7	12.2	---	---	---	11.9	11.0	11.4	10.3	9.6	10.0
22	12.5	11.6	12.0	13.8	13.0	13.5	12.7	11.0	11.8	10.7	9.7	10.2
23	12.7	11.6	12.1	---	---	---	13.3	11.4	12.3	10.4	9.1	9.8
24	12.7	11.7	12.2	---	---	---	13.1	11.6	12.3	9.1	8.6	8.8
25	12.8	11.9	12.3	---	---	---	13.1	10.6	11.8	9.2	8.5	8.7
26	12.9	11.9	12.4	---	---	---	12.1	10.1	11.0	9.7	8.6	9.1
27	13.2	11.8	12.4	---	---	---	10.4	10.0	10.1	9.5	8.8	9.1
28	13.3	11.9	12.6	13.6	13.2	13.4	---	---	---	10.3	8.7	9.4
29	---	---	---	13.4	13.0	13.2	---	---	---	10.3	8.8	9.5
30	---	---	---	---	---	---	---	---	---	10.5	8.5	9.4
31	---	---	---	---	---	---	---	---	---	10.2	8.2	9.1
MONTH	13.3	11.5	12.4	14.7	10.6	12.5	13.3	10.0	11.4	13.3	8.2	9.8

01446990 BUSHKILL CREEK AT EASTON, PA

LOCATION.--Lat 40°41'40", long 75°12'48", Northampton County, Hydrologic Unit 02040105, at bridge on U.S. Route 22 in Easton, 0.5 mi (0.8 km) upstream from Delaware River.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
OCT												
18...	0950	9813	9813	300	--	7.0	10.8	112	0	20	10	10
NOV												
16...	1030	9813	9813	400	--	8.0	11.1	168	0	41	--	17
DEC												
08...	0950	9813	9813	360	--	2.0	13.6	156	0	40	--	15
FEB												
01...	1035	9813	9813	420	--	--	--	176	0	52	--	12
22...	1115	9813	9813	490	--	3.0	--	110	0	56	--	.0
MAR												
15...	1050	9813	9813	260	7.5	3.0	13.0	86	0	27	--	4.9
APR												
05...	0940	9813	9813	430	8.2	9.0	11.0	155	0	42	--	13
MAY												
23...	1025	9813	9813	440	8.1	14.5	10.4	165	0	42	--	16
JUN												
20...	1000	9813	9813	500	7.6	18.0	8.4	220	0	54	--	23
JUL												
24...	1545	9813	9813	600	8.1	21.0	11.0	500	0	56	--	123
AUG												
23...	1120	9813	9813	500	8.3	12.0	10.4	320	0	68	--	37
SEP												
21...	1000	9813	9813	500	8.1	15.0	9.5	200	0	57	--	14

DATE	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
OCT												
18...	70	42	12	198	20	--	3.3	.02	.11	.07	400	--
NOV												
16...	90	70	15	250	<10	258	4.4	.04	.10	.08	120	10
DEC												
08...	90	60	16	216	8	224	.02	.04	.11	.06	430	--
FEB												
01...	116	64	18	244	28	272	4.6	.03	.16	.08	330	--
22...	130	84	20	364	6	370	4.1	.04	.15	.10	340	50
MAR												
15...	54	42	17	174	122	296	3.0	.04	.36	.26	3300	--
APR												
05...	102	64	17	334	8	--	4.1	.03	.11	.13	300	--
MAY												
23...	98	72	18	184	12	196	3.9	.04	.12	.16	240	30
JUN												
20...	146	110	18	426	--	--	3.9	.06	.13	.30	320	--
JUL												
24...	160	110	19	10	10	466	4.6	.05	.20	.07	180	--
AUG												
23...	154	85	18	392	10	--	3.7	.30	.06	.30	200	<10
SEP												
21...	122	65	16	330	14	--	2.9	.04	.08	.28	400	--

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
AUG							
23...	1120	<3	10	<10	<50	<10	10

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA

LOCATION.--Lat 41°07'49", long 75°37'33", Monroe County, Hydrologic Unit 02040106, on left bank 75 ft (23 m) upstream from bridge on State Highway 115, at Stoddartsville, 1.9 mi (3.1 km) upstream from Tobyhanna Creek, and 4 mi (6 km) southwest of Thornhurst. Water-quality sampling site at bridge 75 ft (23 m) downstream.

DRAINAGE AREA.--91.7 mi² (237.5 km²).

WATER--DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year.

REVISED RECORDS.--WSP 1382: 1947, 1951.

GAGE.--Water-stage recorder. Datum of gage is 1,463.81 ft (446.169 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, nonrecording gage at site 350 ft (110 m) downstream at datum 2.14 ft (0.652 m) lower.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--35 years, 188 ft³/s (5.324 m³/s), 27.84 in/year (707 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,900 ft³/s (903 m³/s) Aug. 19, 1955, gage height, 16.37 ft (4.990 m), from floodmarks, from rating curve extended above 1,700 ft³/s (48 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 7.0 ft³/s (0.20 m³/s) Sept. 26, 27, 1964, gage height, 0.22 ft (0.067 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of May 22, 1942 reached a stage of 12.03 ft (3.667 m), from floodmark, present site and datum, discharge, 15,700 ft³/s (445 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 17	1230	1,750	49.6	4.31	1.314	Mar. 27	Unknown	1,640	46.4	4.15	1.265
Jan. 9	1130	*2,990	84.7	*5.88	1.792	May 15	0300	1,630	46.2	4.14	1.262
Jan. 26	2000	1,560	44.2	4.03	1.228						

Minimum discharge, 20 ft³/s (0.566 m³/s) Sept. 15, gage height, 0.32 ft (0.098 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	191	598	213	332	94	750	119	149	42	55	47
2	397	185	646	203	291	93	820	112	137	39	49	34
3	311	180	492	188	255	92	645	110	158	52	37	29
4	267	195	405	175	239	90	559	106	205	86	52	26
5	214	192	349	165	226	89	595	154	161	76	71	24
6	213	178	331	160	212	88	523	200	135	65	62	23
7	195	236	292	150	200	86	550	185	132	56	101	22
8	169	638	257	180	190	85	510	168	196	49	168	25
9	332	564	244	2030	180	84	420	214	205	47	92	37
10	404	441	219	1250	170	83	362	212	163	43	66	28
11	297	822	192	830	165	82	331	177	130	42	55	25
12	241	618	185	629	155	82	343	156	111	38	50	24
13	207	475	211	453	150	85	299	147	137	36	50	23
14	211	388	313	370	145	130	259	665	130	34	44	21
15	573	337	753	320	140	418	233	1460	107	36	38	21
16	578	307	583	290	135	339	215	956	93	35	35	23
17	1540	288	446	270	130	262	200	1100	86	35	33	23
18	1140	297	411	250	125	219	189	1030	83	34	30	34
19	947	260	392	235	120	196	186	868	79	33	29	284
20	975	231	329	225	120	215	289	636	73	31	27	146
21	708	216	449	215	115	282	310	510	68	31	26	95
22	541	211	533	200	110	567	252	412	66	29	25	83
23	437	201	406	190	110	628	212	348	60	28	24	73
24	362	199	339	185	105	722	189	369	56	31	23	59
25	319	189	461	180	105	603	172	386	52	27	23	49
26	307	287	481	1120	100	536	162	307	50	25	24	43
27	333	267	381	1270	100	1190	152	254	52	26	23	38
28	285	229	298	920	98	1350	142	220	49	31	42	35
29	251	202	272	621	---	1190	132	199	48	28	37	33
30	223	205	253	482	---	1010	125	179	49	30	30	31
31	206	---	230	385	---	805	---	161	---	32	34	---
TOTAL	13420	9229	11751	14354	4523	11795	10126	12120	3220	1227	1455	1458
MEAN	433	308	379	463	162	380	338	391	107	39.6	46.9	48.6
MAX	1540	822	753	2030	332	1350	820	1460	205	86	168	284
MIN	169	178	185	150	98	82	125	106	48	25	23	21
CFSM	4.72	3.36	4.13	5.05	1.77	4.14	3.69	4.26	1.17	.43	.51	.53
IN.	5.44	3.74	4.77	5.82	1.83	4.78	4.11	4.92	1.31	.50	.59	.59

CAL YR 1977 TOTAL 89667 MEAN 246 MAX 1540 MIN 25 CFSM 2.68 IN 36.37
WTR YR 1978 TOTAL 94678 MEAN 259 MAX 2030 MIN 21 CFSM 2.82 IN 38.41

01447500 LEHIGH RIVER AT STODDARTSVILLE, PA--Continued

PERIOD OF RECORD.--January 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, NOVEMBER 1977 TO JULY 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	HARD-NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)
NOV 15...	0925	9813	9813	339	41	14	4.0	1.1	2
FEB 23...	0900	9813	9813	108	40	24	2.4	4.9	18
MAY 17...	0945	9813	9813	1130	45	10	2.4	1.1	10
JUL 27...	0950	9813	9813	26	50	28	5.6	3.8	16

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV 15...	10	4.0	66	0	.60	.02	.09	.04	220
FEB 23...	4.0	4.0	120	--	.68	.03	.07	.11	110
MAY 17...	10	7.0	38	--	.76	.01	.22	.06	220
JUL 27...	15	6.0	38	--	.44	.01	.06	.07	140

01447680 TUNKHANNOCK CREEK NEAR LONG POND, PA

LOCATION.--Lat 41°03'55", long 75°31'14", Monroe County, Hydrologic Unit 02040106, on left bank 0.6 mi (1.0 km) downstream from unnamed tributary, 0.9 mi (1.4 km) downstream from bridge on Legislative Route 45040, 3 mi (5 km) west of Long Pond, and 5 mi (8 km) upstream from mouth.

DRAINAGE AREA.--18.0 mi² (46.6 km²). At site used prior to July 7, 1966, 16.8 mi² (43.5 km²).

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 1,800 ft (550 m), from topographic map. Prior to July 7, 1966, nonrecording gage at site 0.9 mi (1.4 km) upstream at different datum.

REMARKS.--Records good except those for winter periods and periods of no gage-height record, Jan. 10 to Feb. 21, which are fair. Diversion above station, since October 1969, to Wild Creek Basin.

AVERAGE DISCHARGE.--13 years, 47.3 ft³/s (1.34 m³/s), 35.69 in/yr (906 mm/yr), adjusted for diversion since October 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft³/s (13.6 m³/s) July 30, 1969, gage height, 4.34 ft (1.323 m); minimum, 3.0 ft³/s (0.085 m³/s) Mar. 11, 1969, gage height, 1.84 ft (0.561 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.81 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 18	0100	179	5.04	3.09	0.942	Jan. 9	Unknown	Unknown	Unknown	Unknown	
Nov. 9	1530	188	5.32	3.12	0.951	Jan. 26	Unknown	Unknown	Unknown	Unknown	
Dec. 10	----	---	----	ice jam		Mar. 18	0730	170	4.81	3.00	0.981
Dec. 25	2400	195	5.52	3.14	0.957	Mar. 28	1730	275	7.79	3.40	1.036
Dec. 27	0100	289	8.18	3.45	1.052	May 15	1930	*339	9.60	*3.64	1.109

Minimum discharge, 5.7 ft³/s (0.161 m³/s) Sept. 8, gage height, 1.99 ft (0.607 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	56	111	53	78	22	184	36	55	22	16	9.0
2	87	49	136	51	66	22	189	36	53	22	17	8.6
3	92	44	128	49	60	22	181	35	52	24	16	8.6
4	82	57	109	47	56	21	149	35	61	40	17	7.3
5	71	64	81	46	52	21	135	41	56	45	17	7.0
6	60	61	72	45	48	21	133	56	49	36	17	6.4
7	53	78	67	43	46	21	130	51	87	27	23	6.2
8	50	160	63	52	43	21	128	48	81	23	53	7.1
9	81	185	59	400	41	21	123	70	111	21	54	8.3
10	116	176	56	210	39	21	107	72	118	19	45	9.8
11	117	184	54	150	38	21	97	53	91	18	33	10
12	98	166	52	120	37	22	95	44	60	17	26	9.4
13	79	136	50	98	36	25	91	40	56	17	25	8.3
14	70	111	59	82	34	43	81	164	61	16	25	7.9
15	83	98	109	72	33	100	75	324	52	17	22	8.3
16	101	81	125	64	32	101	67	306	44	17	19	7.9
17	159	75	113	60	31	78	63	262	40	17	17	7.9
18	178	77	95	55	30	96	60	241	38	17	15	9.4
19	174	76	80	52	29	48	59	205	36	16	13	25
20	153	70	74	50	28	48	83	162	33	15	12	33
21	133	62	82	48	27	61	93	124	31	15	11	35
22	116	57	106	47	26	104	76	102	30	14	10	27
23	101	57	102	46	26	117	63	90	30	13	9.4	22
24	88	60	88	45	25	120	54	100	28	13	8.6	17
25	78	63	114	44	24	109	51	123	27	13	7.9	13
26	74	73	168	250	23	94	47	109	26	12	7.9	12
27	72	73	103	270	23	177	44	87	26	12	7.6	11
28	69	80	73	190	23	263	41	75	24	12	8.3	9.4
29	67	68	62	140	---	271	41	67	24	12	8.3	8.6
30	62	62	58	110	---	245	37	62	23	13	8.6	8.3
31	59	---	55	90	---	207	---	58	---	14	9.0	---
TOTAL	2890	2659	2704	3079	1054	2563	2777	3278	1503	589	578.6	368.7
MEAN	93.2	88.6	87.2	99.3	37.6	82.7	92.6	106	50.1	19.0	18.7	12.3
MAX	178	185	168	400	78	271	189	324	118	45	54	35
MIN	50	44	50	43	23	21	37	35	23	12	7.6	6.2
≠	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
MEAN≠	93.6	89.0	87.6	99.8	38.0	83.2	93.0	106	50.6	19.4	19.2	12.8
CFSM≠	5.20	4.94	4.87	5.54	2.11	4.62	5.17	5.89	2.81	1.08	1.07	.71
IN.≠	6.00	5.51	5.61	6.39	2.20	5.33	5.77	6.79	3.14	1.25	1.23	.79

CAL YR 1977 TOTAL 20774.7 MEAN 56.9 MAX 269 MIN 5.0 MEAN≠ 57.1 CFSM≠ 3.17 IN.≠ 43.11
WTR YR 1978 TOTAL 24043.3 MEAN 65.9 MAX 400 MIN 6.2 MEAN≠ 66.4 CFSM≠ 3.69 IN.≠ 50.01

≠ Diversion above station to Wild Creek basin, equivalent in cubic feet per second furnished by City of Bethlehem
≠ Adjusted for diversion.

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA

LOCATION.--Lat 41°05'05", long 75°36'21", Carbon County, Hydrologic Unit 02040106, on left bank 50 ft (15 m) downstream from bridge on State Highway 940, 500 ft (150 m) downstream from Shingle Mill Run, and 1.5 mi (2.4 km) southwest of Blakeslee. Water-quality sampling site at bridge 50 ft (15 m) upstream.

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,511.23 ft (460.623 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 16, 1962, nonrecording gage at site 50 ft (15 m) upstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation by Pocono Lake about 5.0 mi (8.0 km) upstream and minor diversion from Tunkhannock Creek basin into Wild Creek basin.

AVERAGE DISCHARGE.--17 years, 261 ft³/s (7.392 m³/s) 30.04 in/yr (763 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,760 ft³/s (191 m³/s) July 29, 1969, gage height, 10.69 ft (3.258 m), from rating curve extended above 4,200 ft³/s (120 m³/s) on basis of slope-area measurement at gage height 19.41 ft (5.916 m); minimum, 22 ft³/s (0.62 m³/s) Sept. 24, 25, 1964, gage height, 1.51 ft (0.460 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 19.41 ft (5.916 m), from floodmark, discharge, 35,300 ft³/s (1,000 m³/s), by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45.3 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 17	1300	1,880	53.2	6.25	1.905	Jan. 26	1400	1,790	50.7	6.12	1.865
Nov. 8	1300	1,680	47.6	5.96	1.817	Mar. 27	2400	2,120	60.0	6.57	2.003
Jan. 9	1200	4,250	120	8.73	2.661	May 15	0300	*4,460	126	*8.90	2.713

Minimum discharge, 37 ft³/s (1.05 m³/s) Aug. 24, 27, Sept. 7, gage height, 1.73 ft (0.527 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	260	834	284	455	150	1170	163	234	84	73	57
2	469	254	906	277	394	145	1410	156	219	81	72	54
3	414	253	686	256	353	140	1150	154	221	99	69	48
4	327	343	543	244	323	140	916	152	266	152	83	44
5	258	364	462	239	303	140	907	189	245	177	78	41
6	227	321	413	233	303	135	862	255	208	149	76	39
7	212	544	381	226	300	130	876	247	203	122	143	38
8	193	1570	340	325	286	130	880	226	323	104	350	46
9	485	1370	327	3160	275	130	754	294	387	91	269	62
10	712	1050	284	2110	266	125	642	294	356	84	184	52
11	512	1450	266	1290	250	130	589	245	277	78	137	50
12	374	1130	260	867	237	132	598	219	208	72	112	48
13	297	816	269	682	229	147	543	208	201	69	104	46
14	286	631	376	581	220	309	473	1860	208	67	100	41
15	620	531	852	481	210	741	413	3550	179	70	88	44
16	820	467	738	410	200	637	368	1930	158	70	75	45
17	1780	440	553	380	190	441	341	1840	145	72	64	44
18	1370	438	501	350	190	338	320	1590	141	70	57	55
19	1130	397	455	330	185	291	311	1250	137	66	51	314
20	1050	357	391	310	180	291	448	916	128	63	48	291
21	789	330	620	300	180	353	539	691	124	62	44	191
22	605	317	754	290	170	682	437	539	124	59	42	143
23	484	307	568	280	170	786	356	451	116	56	40	116
24	412	297	452	270	165	862	309	504	108	60	39	90
25	382	297	576	270	160	728	283	589	99	56	39	73
26	375	424	611	1300	160	655	266	496	97	52	39	60
27	375	413	455	1610	155	1510	250	394	97	52	39	55
28	351	369	372	1200	150	1920	232	335	95	56	45	50
29	324	320	320	876	---	1750	189	303	93	52	44	45
30	295	309	305	678	---	1540	172	275	93	57	43	44
31	276	---	297	539	---	1230	---	253	---	66	56	---
TOTAL	16488	16369	15167	20648	6659	16838	17004	20568	5490	2468	2703	2326
MEAN	532	546	489	666	238	543	567	663	183	79.6	87.2	77.5
MAX	1780	1570	906	3160	455	1920	1410	3550	387	177	350	314
MIN	193	253	260	226	150	125	172	152	93	52	39	38
CFSM	4.51	4.63	4.14	5.64	2.02	4.60	4.81	5.62	1.55	.68	.74	.66
IN.	5.20	5.16	4.78	6.51	2.10	5.31	5.36	6.48	1.73	.78	.85	.73

CAL YR 1977 TOTAL 128943 MEAN 353 MAX 2110 MIN 41 CFSM 2.99 IN 40.65
WTR YR 1978 TOTAL 142728 MEAN 391 MAX 3550 MIN 38 CFSM 3.31 IN 45.00

01447720 TOBYHANNA CREEK NEAR BLAKESLEE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, NOVEMBER 1977 TO JULY 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	HARDNESS (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)
NOV 15...	1040	9813	9813	531	40	14	3.2	1.6	6
FEB 23...	1000	9813	9813	170	41	14	2.4	2.2	10
MAY 17...	1017	9813	9813	1850	45	10	2.4	1.1	8
JUL 27...	1000	9813	9813	52	47	28	2.4	6.0	10

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
NOV 15...	10	7.0	42	4	.62	.04	.07	.04	330
FEB 23...	4.0	8.0	100	--	.54	.02	.08	.31	150
MAY 17...	10	8.0	34	--	.68	.01	.23	.07	290
JUL 27...	15	8.0	36	--	.50	.01	.05	.97	300

01447800 LEHIGH RIVER BELOW FRANCIS E. WALTER LAKE NEAR WHITE HAVEN, PA

LOCATION.--Lat 41°06'17", long 75°43'57", Luzerne County, Hydrologic Unit 02040106, on right bank 0.7 mi (1.1 km) downstream from Francis E. Walter Lake, 2.0 mi (3.2 km) upstream from Fawn Run, and 4 mi (6.4 km) northeast of White Haven.

DRAINAGE AREA.--290 mi^2 (751 km^2).

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1962 published as "below Bear Creek Reservoir", October 1962 to September 1971 published as "below Francis E. Walter Reservoir".

GAGE.--Water-stage recorder. Datum of gage is 1,212.95 ft (369.707 m) National Geodetic Vertical Datum of 1929. (levels by Corps of Engineers).

REMARKS.--Records good except for winter periods, which are fair. Flow regulated by Francis E. Walter Lake 0.7 mi (1.1 km) upstream since February 1961 (see p. 97).

AVERAGE DISCHARGE.--21 years, 617 ft^3/s (17.47 m^3/s), 28.87 in/yr (733 mm/yr), adjusted for storage since February 1961.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft^3/s (391 m^3/s) Dec. 21, 1957, gage height, 9.85 ft (3.002 m), from rating curve extended above 6,100 ft^3/s (170 m^3/s); minimum, 1.3 ft^3/s (0.037 m^3/s) Nov. 14, 1961, result of shutoff at lake; minimum gage height, 1.86 ft (0.567 m) Sept. 16, 1964; minimum daily discharge, 22 ft^3/s (0.62 m^3/s) July 20-23, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge known, 54,200 ft^3/s (1,530 m^3/s) Aug. 19, 1955, based on slope-area measurement at site 4.9 mi (7.9 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,140 ft^3/s (259 m^3/s) Mar. 31, gage height, 8.70 ft (2.652 m); minimum, 61 ft^3/s (1.73 m^3/s) Sept. 4, 5, gage height, 2.60 ft (0.792 m); minimum daily, 61 ft^3/s (1.73 m^3/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	700	1670	714	1820	310	1970	408	490	130	201	150
2	392	685	2330	647	1120	310	2020	397	449	130	136	127
3	194	540	2040	567	830	300	2860	328	454	261	122	127
4	133	552	1350	522	720	290	3950	322	662	335	151	88
5	139	692	1020	533	660	290	3610	346	715	213	182	61
6	142	692	1000	547	630	290	2710	502	443	200	185	63
7	888	881	905	538	610	280	1770	696	347	202	296	65
8	1900	1370	750	633	590	270	1830	679	572	202	706	65
9	1800	2340	775	634	570	260	1870	601	762	188	651	66
10	1780	2560	738	1920	540	260	1260	558	794	150	327	66
11	1720	2130	679	4050	520	260	1190	566	627	150	242	66
12	1630	2240	421	5410	490	265	1180	566	454	150	242	66
13	1080	2190	514	3910	480	279	1090	560	454	168	209	113
14	794	2060	882	1890	460	336	915	1230	454	178	150	153
15	949	1540	2070	1780	440	656	771	1860	382	178	150	153
16	1110	1070	2140	1380	430	830	754	3250	337	176	150	123
17	1260	1040	1640	921	420	850	738	2970	337	162	150	99
18	2540	949	1460	901	410	853	714	3570	337	141	195	97
19	3420	886	1110	859	400	850	691	4340	308	141	175	586
20	2730	852	963	808	390	844	761	4180	287	130	124	752
21	4090	754	1330	673	380	1070	991	3890	287	103	88	373
22	3850	708	1890	640	370	1550	1000	3410	221	85	66	373
23	2460	708	1480	630	360	1780	928	1690	178	88	66	296
24	1630	692	1260	620	350	1850	659	895	181	88	66	139
25	1540	627	1230	620	340	1890	538	1400	218	88	68	139
26	1360	770	1570	699	340	1820	549	1130	287	88	68	139
27	1140	949	1290	2010	330	1290	548	895	282	122	68	139
28	836	852	984	3100	320	1680	486	794	218	136	122	139
29	715	754	729	3050	---	4050	421	754	147	124	195	192
30	715	715	759	2920	---	6180	419	678	130	124	192	357
31	715	---	790	2690	---	5410	---	620	---	184	188	---
TOTAL	44473	33498	37769	46816	15320	37453	39193	44085	11814	4815	5931	5372
MEAN	1435	1117	1218	1510	547	1208	1306	1422	394	155	191	179
MAX	4090	2560	2330	5410	1820	6180	3950	4340	794	335	706	752
MIN	133	540	421	522	320	260	419	322	130	85	66	61
MEAN≠	1422	1109	1219	1536	517	1332	1179	1419	396	153	192	178
CFSM≠	4.90	3.82	4.20	5.30	1.78	4.59	4.07	4.89	1.36	.53	.66	.61
IN.≠	5.65	4.27	4.85	6.11	1.86	5.30	4.54	5.64	1.52	.61	.76	.68

CAL YR 1977 TOTAL 294415 MEAN 807 MAX 4090 MIN 66 MEAN≠ 806 CFSM≠ 2.78 IN.≠ 37.75
WTR YR 1978 TOTAL 326539 MEAN 895 MAX 6180 MIN 61 MEAN≠ 893 CFSM≠ 3.08 IN.≠ 41.78

≠ Adjusted for change in contents in Francis E. Walter Lake.

01448500 DILLDOWN CREEK NEAR LONG POND, PA

LOCATION.--Lat 41°02'08", long 75°32'37", Monroe County, Hydrologic Unit 02040106, on left bank 60 ft (18 m) upstream from bridge on Shucks Mill Road, 2.8 mi (4.5 km) upstream from Mud Run, 4 mi (6 km) northeast of Albrightsville, and 4.4 mi (7.1 km) west of Long Pond.

DRAINAGE AREA.--2.39 mi² (6.19 km²).

PERIOD OF RECORD.--October 1948 to current year.

REVISED RECORDS.--WSP 1392: 1949(M), 1950-53.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,665.07 ft (507.513 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods and doubtful record Jan. 9 to July 26, which are fair.

AVERAGE DISCHARGE.--30 years, 4.95 ft³/s (0.140 m³/s), 28.12 in/yr (714 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft³/s (17.8 m³/s) June 14, 1969, gage height, 3.995 ft (1.218 m), from rating curve extended above 300 ft³/s (8.50 m³/s) on basis of culvert and flow-over-dam computations of peak flow; minimum, 0.10 ft³/s (0.003 m³/s) Dec. 10, 1964, gage height, 0.55 ft (0.168 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Oct. 9	1230	53	1.50	2.21	0.674	Jan. 9	0400	*233	6.60	*3.04	0.927
Oct. 17	0200	78	2.21	2.37	0.722	Jan. 26	0900	101	2.86	2.50	0.762
Nov. 11	0015	53	1.50	2.21	0.674	Mar. 27	1415	95	2.69	2.47	0.753
Dec. 21	1400	55	1.56	2.22	0.677	May 14	1600	90	2.55	2.44	0.744

Minimum discharge, 0.56 ft³/s (0.016 m³/s) Sept. 13, gage height, 0.88 ft (0.268 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.4	26	7.4	7.6	2.6	18	3.5	5.9	2.2	1.8	.92
2	11	5.4	13	7.6	7.0	2.5	16	3.5	5.0	2.2	1.5	.82
3	7.2	5.9	10	7.4	6.4	2.4	12	3.2	5.9	3.9	1.5	.78
4	6.3	12	9.1	7.2	6.0	2.3	12	3.2	6.5	4.2	2.1	.74
5	5.4	7.2	8.5	7.0	5.8	2.2	13	5.0	5.0	2.7	1.5	.70
6	5.6	6.1	8.5	5.0	6.0	2.2	10	4.8	4.3	2.3	2.0	.70
7	5.0	20	7.2	4.8	6.1	2.1	11	3.8	6.5	2.2	8.1	.70
8	4.8	32	6.3	17	5.4	2.1	9.6	4.0	9.4	2.0	7.3	1.1
9	29	15	6.5	103	5.0	2.1	8.2	9.1	17	2.0	1.8	1.0
10	14	18	5.9	22	4.7	2.2	7.7	4.8	7.2	1.9	1.5	.74
11	9.4	32	5.4	12	4.4	2.3	7.7	3.6	5.2	1.9	1.5	.74
12	8.5	17	5.0	10	4.3	2.6	7.4	3.5	4.6	1.9	2.1	.74
13	7.4	13	5.2	9.0	4.2	2.9	6.7	3.9	6.1	1.8	4.3	.62
14	9.5	11	10	10	4.1	14	6.1	46	4.8	1.9	1.6	.67
15	15	10	18	8.7	4.2	12	5.6	28	4.2	2.0	1.3	.87
16	22	9.4	10	7.4	3.9	6.7	5.4	22	3.6	1.9	1.2	.87
17	49	10	6.4	6.6	3.7	5.2	5.2	30	3.8	1.9	1.1	.77
18	22	9.9	7.2	7.4	3.6	4.6	5.0	27	3.6	1.7	1.1	1.1
19	23	7.7	7.9	6.7	3.6	4.8	5.4	20	3.4	1.6	1.0	5.4
20	18	6.7	7.0	7.0	3.5	5.2	9.6	16	3.2	1.6	1.0	1.1
21	13	6.7	22	6.3	3.5	7.4	7.0	13	3.1	1.6	.92	.94
22	12	7.0	16	5.6	3.2	13	5.2	11	3.2	1.6	.92	.80
23	10	6.5	11	5.4	3.2	15	4.6	9.6	2.8	1.6	.92	.75
24	9.1	6.7	10	5.4	3.1	16	4.5	17	2.7	1.6	.87	.74
25	8.5	5.9	14	9.9	2.9	13	4.3	14	2.6	1.6	.92	.74
26	8.5	12	11	69	2.9	15	4.2	9.4	2.6	1.6	.87	.67
27	8.2	7.0	8.5	22	2.8	66	4.0	8.2	2.6	1.5	.87	.68
28	7.2	5.9	7.3	15	2.7	39	3.9	7.7	2.4	1.7	1.2	.67
29	6.5	5.4	6.4	12	---	32	3.8	7.2	2.3	1.5	.92	.65
30	6.1	6.4	6.0	9.8	---	24	3.6	6.7	2.3	1.5	.92	.67
31	5.6	---	5.6	8.6	---	19	---	6.3	---	2.2	1.1	---
TOTAL	379.8	323.2	300.9	442.2	123.8	342.4	226.7	355.0	141.8	61.8	55.73	28.39
MEAN	12.3	10.8	9.71	14.3	4.42	11.0	7.56	11.5	4.73	1.99	1.80	.95
MAX	49	32	26	103	7.6	66	18	46	17	4.2	8.1	5.4
MIN	4.8	5.4	5.0	4.8	2.7	2.1	3.6	3.2	2.3	1.5	.87	.62
CFSM	5.15	4.52	4.06	5.98	1.85	4.60	3.16	4.81	1.98	.83	.75	.40
IN.	5.91	5.03	4.68	6.88	1.93	5.33	3.53	5.52	2.21	.96	.87	.44

CAL YR 1977 TOTAL 2096.80 MEAN 5.74 MAX 49 MIN .56 CFSM 2.40 IN 32.62
WTR YR 1978 TOTAL 2781.72 MEAN 7.62 MAX 103 MIN .62 CFSM 3.19 IN 43.28

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA

LOCATION.--Lat 40°53'51", long 75°30'10", Monroe County, Hydrologic Unit 02040106, on right bank 20 ft (6 m) downstream from bridge on U.S. Highway 209 at Kresgeville, 0.2 mi (0.3 km) downstream from Middle Creek, and 13 mi (21 km) northeast of Lehighton.

DRAINAGE AREA.--49.9 mi² (129.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 659.72 ft (201.083 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--12 years, 111 ft³/s (3.144 m³/s) 30.21 in/yr (767 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) July 28, 1969, gage height, 9.21 ft (2.807 m), from rating curve extended above 800 ft³/s (23 m³/s); minimum, 16 ft³/s (0.45 m³/s) Oct. 9, 10, 1970, gage height, 2.86 ft (0.872 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 17	1115	544	15.4	5.75	1.753	Mar. 27	1915	1,100	31.2	7.35	2.240
Dec. 21	2130	569	16.1	5.84	1.780	May 15	0330	566	16.0	5.83	1.777
Jan. 9	0715	*1,340	37.9	*7.87	2.399	May 18	0515	541	15.3	5.74	1.750
Jan. 26	1800	844	23.9	6.71	2.045	Aug. 13	0200	630	17.8	6.05	1.844

Minimum discharge, 26 ft³/s (0.74 m³/s) Sept. 14, 15, gage height, 2.95 ft (0.899 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	89	335	186	191	60	293	73	184	58	42	38
2	129	87	291	176	174	58	262	71	144	56	37	34
3	96	84	250	160	160	56	224	69	141	76	35	33
4	86	91	218	148	148	59	208	68	148	82	47	31
5	78	82	200	138	141	58	200	81	124	62	43	30
6	75	78	204	133	138	61	178	81	114	56	39	29
7	70	155	175	128	145	53	176	71	115	53	78	29
8	65	346	152	202	128	52	158	70	139	52	110	48
9	148	311	147	1070	117	51	145	118	260	51	51	43
10	158	275	134	628	111	50	136	90	192	52	42	31
11	122	345	126	415	106	51	131	83	157	46	43	29
12	110	293	122	327	100	57	126	82	142	45	47	28
13	99	254	116	285	96	67	117	83	156	44	212	27
14	100	219	162	269	95	209	110	322	132	45	91	26
15	137	194	240	229	90	389	105	522	118	48	66	27
16	159	176	225	198	86	304	101	435	109	44	57	28
17	481	171	219	185	84	201	97	493	105	45	50	28
18	364	166	257	184	82	159	93	505	101	41	46	28
19	298	142	289	161	79	157	97	426	95	39	42	78
20	253	131	253	158	76	208	135	345	89	38	40	41
21	204	125	447	156	76	263	107	289	85	38	38	33
22	180	123	497	138	74	364	94	242	86	38	36	37
23	162	119	384	129	71	375	87	210	79	39	34	33
24	146	115	319	123	68	365	85	280	74	40	34	30
25	136	108	394	156	67	318	83	271	72	39	33	29
26	132	206	356	658	65	380	81	207	71	39	33	28
27	128	159	310	623	63	921	80	189	72	40	32	27
28	115	152	273	385	60	775	78	179	66	46	41	27
29	106	144	240	296	---	528	76	166	65	40	35	26
30	99	156	217	247	---	410	74	154	63	38	32	26
31	93	---	201	214	---	339	---	198	---	48	37	---
TOTAL	4530	5096	7753	8505	2891	7398	3937	6473	3498	1478	1603	982
MEAN	149	170	250	274	103	239	131	209	117	47.7	51.7	32.7
MAX	481	346	497	1070	191	921	293	522	260	82	212	78
MIN	65	78	116	123	60	50	74	68	63	38	32	26
CFSM	2.99	3.41	5.01	5.49	2.06	4.79	2.63	4.19	2.35	.96	1.04	.66
IN.	3.45	3.80	5.78	6.34	2.16	5.52	2.93	4.83	2.61	1.10	1.19	.73

CAL YR 1977 TOTAL 43291 MEAN 119 MAX 1070 MIN 20 CFSM 2.39 IN 32.27
WTR YR 1978 TOTAL 54244 MEAN 149 MAX 1070 MIN 26 CFSM 2.99 IN 40.44

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to September 1970, May 1971 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.5°C July 25, 1970; minimum, freezing point on several days each year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	7.0	2.5	5.0	2.5	2.0	2.5
2				---	---	---	7.0	5.5	6.5	2.5	2.0	2.0
3				---	---	---	5.5	4.5	5.0	2.0	1.0	1.5
4				---	---	---	5.0	5.0	5.0	1.0	.0	.5
5				---	---	---	5.0	3.0	4.0	2.0	.5	1.5
6				---	---	---	4.5	3.5	4.0	3.5	2.0	2.5
7				---	---	---	4.0	2.5	3.0	3.5	3.0	3.5
8				---	---	---	2.5	2.0	2.0	3.5	.0	2.5
9				---	---	---	3.0	2.0	2.5	4.0	1.0	3.0
10				---	---	---	2.0	.5	1.0	2.5	.5	2.0
11				10.5	9.5	10.0	.5	.5	.5	2.5	2.0	2.0
12				9.0	7.5	8.5	.5	.0	.0	2.0	1.5	2.0
13				7.5	6.5	7.0	2.5	.0	1.5	2.0	1.0	2.0
14				6.5	5.5	6.0	3.5	.0	2.0	2.0	1.0	2.0
15				7.0	6.0	6.5	4.0	1.0	3.0	2.0	.5	1.5
16				8.5	7.0	7.5	4.0	3.5	4.0	1.5	.0	1.0
17				9.0	8.0	8.5	4.0	3.5	4.0	1.5	.0	1.0
18				8.5	7.0	7.5	4.0	1.5	3.0	2.0	.0	1.0
19				7.0	6.5	7.0	5.0	2.0	3.5	2.0	.5	1.5
20				6.5	5.0	5.5	4.5	4.0	4.5	1.5	.0	.5
21				7.0	5.5	6.0	4.0	1.5	2.5	1.0	.0	.5
22				7.0	6.5	7.0	4.5	3.0	3.5	1.5	.0	.5
23				6.5	6.0	6.0	5.5	5.0	5.0	.5	.0	.0
24				7.0	6.0	6.5	5.0	4.5	5.0	1.0	.0	.5
25				6.5	5.0	5.5	5.0	3.5	4.5	3.5	1.0	2.0
26				5.5	3.5	5.0	4.0	3.0	4.0	3.0	.0	1.0
27				4.5	4.0	4.0	3.0	2.0	2.5	1.5	.5	1.0
28				4.5	3.5	4.0	2.0	1.5	2.0	---	---	---
29				4.0	4.0	4.0	2.0	1.0	1.5	---	---	---
30				5.0	4.0	4.5	2.5	1.5	2.0	---	---	---
31				---	---	---	3.0	2.5	2.5	---	---	---
MONTH				10.5	3.5	6.5	7.0	.0	3.0	4.0	.0	1.5

01449360 POHOPOCO CREEK AT KRESGEVILLE, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	12.5	10.5	11.5
2							---	---	---	13.5	10.5	12.0
3							---	---	---	14.0	12.0	13.0
4							7.5	7.0	7.0	13.0	11.5	12.0
5							9.0	7.5	8.0	11.5	10.0	10.5
6							8.5	7.5	8.0	10.5	10.0	10.0
7							9.5	8.0	9.0	12.5	10.5	11.5
8							10.0	8.5	9.0	12.0	11.0	11.0
9							9.5	7.0	8.5	13.0	11.0	12.0
10							11.0	7.0	9.0	12.5	12.0	12.5
11							11.0	9.0	10.0	14.5	12.0	13.0
12							13.0	9.0	11.0	14.0	12.5	13.5
13							12.5	9.0	11.0	14.0	13.0	13.5
14							11.0	9.0	10.0	14.5	13.0	13.5
15							9.5	7.0	8.5	13.0	12.0	12.5
16							9.0	7.0	8.5	12.5	12.0	12.0
17							9.0	7.5	8.5	12.5	12.0	12.0
18							10.0	7.5	9.0	12.5	12.0	12.0
19							10.0	8.5	9.0	14.5	11.5	13.0
20							9.5	8.5	9.0	15.0	12.5	14.0
21							9.0	8.5	8.5	15.5	14.0	14.5
22							12.0	7.0	9.5	15.0	12.5	14.0
23							12.0	7.0	10.0	14.5	12.5	13.5
24							11.5	8.5	9.5	14.5	13.0	14.0
25							14.0	8.0	11.0	14.5	13.0	13.5
26							13.5	12.0	13.0	15.5	13.5	14.5
27							13.0	12.0	12.5	15.5	14.0	14.5
28							14.0	11.0	12.5	17.0	14.0	15.5
29							14.5	11.5	13.0	16.5	14.5	15.5
30							14.0	12.5	13.0	17.5	14.0	16.0
31							---	---	---	18.0	14.5	16.5
MONTH							14.5	7.0	10.0	18.0	10.0	13.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.5	15.5	16.0	16.5	14.0	15.5	17.0	15.0	16.0	19.0	16.0	17.5
2	17.0	14.0	16.0	15.0	13.0	14.0	20.0	16.5	18.0	18.0	15.0	16.5
3	16.0	14.0	14.5	14.5	13.0	13.5	20.5	18.5	19.5	18.5	15.5	17.0
4	15.0	12.5	13.5	13.5	12.5	13.0	20.0	18.5	19.0	18.5	16.0	17.0
5	15.0	12.0	13.5	15.5	12.0	14.0	18.5	17.0	18.0	18.0	14.5	16.5
6	15.0	12.0	13.5	17.0	13.5	15.5	20.5	17.0	18.5	19.5	15.5	17.5
7	14.0	12.0	12.5	18.0	14.5	16.5	22.0	18.5	19.5	20.5	17.5	19.0
8	15.5	13.5	14.0	18.5	16.0	17.5	21.0	19.5	20.5	18.5	14.5	16.0
9	16.0	13.0	15.0	20.0	17.0	18.5	20.5	18.0	19.5	17.0	14.0	15.0
10	14.5	13.0	13.5	19.5	17.5	18.5	20.0	18.5	19.5	14.5	12.5	13.5
11	15.0	12.0	13.5	18.5	16.0	17.0	19.0	17.5	18.0	16.0	14.0	15.0
12	15.5	12.5	14.0	17.5	13.5	15.5	20.0	17.5	18.5	18.0	15.5	16.5
13	14.5	12.5	13.5	17.5	14.5	16.0	21.0	19.5	20.0	17.0	14.5	16.0
14	13.0	10.5	12.0	17.0	16.0	16.0	20.0	17.5	19.0	14.5	12.5	13.5
15	13.5	9.5	11.5	18.5	15.5	17.0	20.0	17.5	18.5	14.5	13.5	14.0
16	13.5	10.5	12.0	17.5	17.0	17.5	21.0	18.5	20.0	15.0	13.5	14.5
17	13.0	12.0	12.0	17.0	16.0	16.5	22.5	20.0	21.0	16.0	13.0	15.0
18	15.5	12.0	13.5	19.0	15.5	17.0	21.0	18.5	20.0	17.0	15.5	16.0
19	17.0	14.0	15.5	20.0	16.0	18.0	21.0	17.5	19.5	17.5	15.5	16.5
20	17.0	13.5	15.5	20.5	17.0	18.5	21.0	19.5	20.0	17.0	14.5	16.0
21	16.0	14.0	15.0	21.0	17.5	19.5	20.5	17.0	19.0	18.5	15.5	17.0
22	16.5	14.0	15.5	22.5	19.0	20.5	19.0	16.0	18.0	17.5	16.0	17.0
23	16.5	13.5	15.0	23.5	20.0	21.5	19.5	16.0	17.5	15.5	13.5	14.5
24	16.0	13.0	15.0	22.5	20.0	21.0	20.5	17.0	18.5	14.5	12.0	13.5
25	16.0	12.5	14.5	20.0	17.5	19.0	19.0	17.0	18.0	15.5	13.0	14.0
26	15.5	14.0	14.5	18.5	17.0	17.5	19.5	16.0	18.0	13.0	11.0	12.5
27	18.0	14.0	16.0	20.0	17.5	18.5	18.5	16.0	17.0	13.0	10.0	11.5
28	19.5	16.5	18.0	21.0	18.0	19.5	18.0	17.0	17.5	13.5	11.0	12.0
29	18.0	16.0	17.0	18.0	16.5	17.5	21.0	17.5	19.0	12.5	9.5	11.0
30	18.5	15.0	16.5	19.5	17.0	18.0	19.0	18.0	18.5	12.0	9.0	11.0
31	---	---	---	17.0	15.0	15.5	18.0	17.0	17.5	---	---	---
MONTH	19.5	9.5	14.5	23.5	12.0	17.0	22.5	15.0	18.5	20.5	9.0	15.0

01449500 WILD CREEK AT HATCHERY, PA

LOCATION.--Lat 40°55'22", long 75°33'32", Carbon County, Hydrologic Unit 02040106, on left bank at Hatchery, 0.5 mi (0.8 km) downstream from Penn Forest Dam, 2.2 mi (3.5 km) upstream from Wild Creek Dam, 4 mi (6 km) upstream from mouth, and 9.5 mi (15.3 km) northeast of Palmerton.

DRAINAGE AREA.--16.8 mi² (43.5 km²).

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1051: Drainage area. WSP 1382: 1941-42, 1943(M), 1944-45, 1947, 1949, 1951-53.

GAGE.--Water-stage recorder. Datum of gage is 842.71 ft (256.858 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow completely regulated since January 1959 by Penn Forest Reservoir 0.5 mi (0.8 km) upstream (see p. 97).

AVERAGE DISCHARGE.--38 years, 36.2 ft³/s (1.025 m³/s), 29.26 in/yr (743 mm/yr), adjusted for storage since January 1959.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,360 ft³/s (66.8 m³/s) May 23, 1942, gage height, 6.00 ft (1.829 m), from rating curve extended above 220 ft³/s (6.2 m³/s) on basis of contracted-opening measurement at gage height 5.59 ft (1.704 m); minimum, 1.0 ft³/s (0.028 m³/s) Aug. 3-6, Oct. 2, 1958, Oct. 24, 1969, result of regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 304 ft³/s (8.61 m³/s) Mar. 27, gage height, 3.27 ft (0.997 m); minimum, 4.2 ft³/s (0.12 m³/s) Sept. 18, gage height, 1.43 ft (0.436 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	29	98	69	70	32	128	31	92	26	38	29
2	5.2	29	100	67	66	36	111	30	76	22	38	26
3	12	29	88	61	61	41	94	18	69	26	38	26
4	35	29	79	57	57	43	86	13	66	35	38	26
5	39	29	78	55	53	43	85	24	57	30	38	26
6	39	29	79	52	57	43	76	31	52	26	39	26
7	36	26	70	50	60	43	76	31	52	24	41	26
8	34	26	61	52	51	43	75	32	64	22	22	31
9	44	15	61	203	49	43	61	50	88	22	13	33
10	29	9.9	56	206	46	43	57	49	79	20	13	33
11	12	12	49	144	44	43	56	41	67	22	13	33
12	12	11	47	115	43	43	56	39	60	33	15	33
13	12	9.6	46	102	40	43	53	38	63	39	21	33
14	12	8.7	55	100	41	44	56	98	57	40	9.3	33
15	12	8.0	81	90	39	44	35	153	49	41	5.8	33
16	26	7.7	78	78	36	44	31	132	45	41	5.4	33
17	25	7.7	72	73	34	44	32	156	34	43	5.0	33
18	11	8.2	79	79	34	15	34	172	31	43	4.9	13
19	8.2	19	83	69	33	15	37	148	36	43	4.9	5.6
20	7.5	49	73	67	30	15	49	128	36	41	4.9	4.6
21	7.0	60	111	64	30	16	50	115	35	40	13	4.6
22	6.6	64	132	55	28	19	46	96	35	40	35	15
23	6.2	63	109	51	26	20	38	86	34	40	38	25
24	6.0	57	96	47	26	29	37	102	32	40	38	30
25	22	51	109	60	26	63	35	111	30	40	38	29
26	32	73	113	146	26	98	33	94	29	39	38	26
27	30	63	100	144	25	236	33	85	31	39	38	26
28	30	56	90	115	23	266	35	78	32	39	37	30
29	30	52	83	96	---	209	28	73	30	39	36	35
30	30	53	76	83	---	163	33	70	32	39	34	39
31	29	---	73	75	---	134	---	83	---	39	34	---
MEAN	21.5	32.8	81.5	87.9	41.2	64.9	55.2	77.6	49.8	34.6	25.4	26.5
MAX	44	73	132	206	70	266	128	172	92	43	41	39
MIN	5.2	7.7	46	47	23	15	28	13	29	20	4.9	4.6
MEAN≠	58.6	81.8	82.3	88.1	38.3	69.5	50.3	78.9	48.9	17.1	16.3	10.1
CFSM≠	3.49	4.87	4.90	5.24	2.28	4.14	3.00	4.70	2.91	1.02	.97	.60
IN.≠	4.02	5.43	5.65	6.04	2.38	4.77	3.34	5.42	3.25	1.17	1.12	.67

CAL YR 1977 MEAN 44.4 MAX 294 MIN 4.3 MEAN≠ 44.7 CFSM≠ 2.66 IN.≠ 36.12
WTR YR 1978 MEAN 50.1 MAX 266 MIN 4.6 MEAN≠ 50.04 CFSM≠ 3.00 IN.≠ 40.75

≠ Adjusted for change in contents in Penn Forest Reservoir.

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA

LOCATION.--Lat 40°50'44", long 75°38'46", Carbon County, Hydrologic Unit 02040106, on right bank 0.1 mi (0.2 km) upstream from Sawmill Run, 0.45 mi (0.72 km) downstream from Beltzville Dam, 1.3 mi (2.1 km) upstream from Bull Run, and 2.3 mi (3.7 km) northeast of Parryville.

DRAINAGE AREA.--96.4 mi^2 (249.7 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to current year.

REVISED RECORDS.--WDR PA-77-1: 1976

GAGE.--Water-stage recorder and concrete control. Datum of gage is 492.05 ft (149.977 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Wild Creek and Penn Forest Reservoirs 7.3 mi (11.7 km) and 10.0 mi (16.1 km) upstream, respectively, and Beltzville Lake 0.45 mi (0.72 km) upstream (see p. 97). Figures of daily discharge do not include diversion from Wild Creek Reservoir to city of Bethlehem. Diversion from Tunkhannock Creek to Wild Creek basin above station since October 1969 (see p. 97).

AVERAGE DISCHARGE.--11 years, 223 ft^3/s (6.315 m^3/s), 31.36 in/yr (797 mm/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,740 ft^3/s (49.3 m^3/s) May 8, 1973, gage height, 5.59 ft (1.704 m); minimum, 0.90 ft^3/s (0.025 m^3/s) Oct. 11, 12, 1969, gage height, 2.12 ft (0.646 m), result of upstream shutoff.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) Aug. 13, gage height, 5.38 ft (1.640 m); minimum daily 46 ft^3/s (1.30 m^3/s) July 18-30, Aug. 1, 2, 5, 9, Sept. 3-7, 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	161	365	377	813	76	1050	103	219	48	46	89
2	54	146	392	377	808	76	1040	105	219	48	46	52
3	52	146	392	377	803	77	1030	105	219	56	47	46
4	53	146	392	377	553	77	919	105	219	152	47	46
5	54	146	392	374	371	76	824	105	219	98	46	46
6	54	146	392	371	371	76	821	105	219	71	47	46
7	54	146	390	371	371	76	815	105	219	71	48	46
8	54	149	387	373	242	76	691	105	219	71	47	47
9	55	149	387	185	152	76	619	105	220	71	46	47
10	54	242	387	50	155	76	463	103	219	71	77	46
11	54	401	383	108	156	76	292	123	219	71	101	46
12	54	401	382	581	156	76	243	104	219	71	104	46
13	54	398	382	569	156	78	190	105	318	71	203	57
14	84	397	383	387	156	79	113	106	371	71	170	63
15	108	397	382	634	156	78	79	225	371	71	216	63
16	108	397	385	825	156	78	80	398	199	71	213	63
17	155	397	387	820	156	78	78	401	102	55	210	63
18	312	396	389	812	156	78	92	405	135	46	210	63
19	399	392	392	807	156	79	99	667	152	46	210	63
20	398	392	392	415	140	81	100	862	152	46	210	63
21	397	230	407	160	113	81	99	851	152	46	206	63
22	397	142	406	160	105	81	99	801	153	46	206	63
23	397	142	652	160	87	252	99	837	143	46	113	63
24	397	142	846	160	76	387	99	838	109	46	48	63
25	395	142	843	123	76	387	101	831	94	46	48	63
26	392	143	839	81	76	394	102	827	94	46	48	63
27	392	142	835	381	76	422	102	708	94	46	49	63
28	392	142	826	840	76	648	104	636	94	46	50	63
29	392	206	819	831	---	875	105	479	95	46	104	63
30	390	284	566	824	---	861	103	382	74	46	139	63
31	261	---	377	819	---	916	---	274	---	47	139	---
TOTAL	6465	7260	15149	13729	6868	6847	10651	11906	5531	1883	3494	1731
MEAN	209	242	489	443	245	221	355	384	184	60.7	113	57.7
MAX	399	401	846	840	813	916	1050	862	371	152	216	89
MIN	52	142	365	50	76	76	78	103	74	46	46	46
(≠)	38.0	36.8	36.5	36.4	37.9	37.4	37.4	38.9	40.4	40.1	41.2	39.6
MEAN≠	317	369	494	504	189	445	265	428	218	78.2	147	66.2
Cfsm≠	3.29	3.83	5.12	5.23	1.96	4.62	2.75	4.44	2.26	.81	1.52	.69
In.≠	3.79	4.27	5.90	6.03	2.04	5.33	3.07	5.12	2.52	.93	1.75	.77

CAL YR 1977 TOTAL 74446 MEAN 204 MAX 846 MIN 43 MEAN≠ 242 Cfsm≠ 2.51 In.≠ 34.02
WTR YR 1978 TOTAL 91514 MEAN 251 MAX 1050 MIN 46 MEAN≠ 295 Cfsm≠ 3.06 In.≠ 41.53

≠ Diversion above station from Wild Creek Reservoir for municipal supply, equivalent in cubic feet per second, furnished by city of Bethlehem.

≠ Adjusted for diversion from Wild Creek Reservoir and change in contents in Penn Forest and Wild Creek Reservoirs and Beltzville Lake.

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.5°C on several days during July, August 1970; minimum, freezing point Dec. 9, 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.0	14.5	15.5									
2	16.0	15.5	16.0									
3	15.5	15.0	15.5									
4	16.0	15.0	15.5									
5	16.0	15.0	15.5									
6	15.5	13.0	15.5									
7	15.5	13.5	14.5									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	16.0	13.0	15.5									

01449800 POHOPOCO CREEK BELOW BELTZVILLE DAM NEAR PARRYVILLE, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	9.5	8.5	9.0
2							---	---	---	10.5	8.5	9.5
3							---	---	---	11.0	9.0	9.5
4							---	---	---	10.5	9.0	9.5
5							---	---	---	9.5	9.0	9.5
6							---	---	---	9.5	9.0	9.5
7							---	---	---	11.0	9.0	10.0
8							---	---	---	10.0	9.5	10.0
9							---	---	---	10.5	9.0	10.0
10							---	---	---	10.0	9.0	9.5
11							---	---	---	10.5	7.5	9.0
12							---	---	---	11.5	9.5	10.5
13							---	---	---	---	---	---
14							---	---	---	---	---	---
15							---	---	---	---	---	---
16							---	---	---	---	---	---
17							---	---	---	---	---	---
18							---	---	---	---	---	---
19							---	---	---	12.0	9.0	10.5
20							---	---	---	9.0	9.0	9.0
21							---	---	---	10.5	9.0	9.5
22							---	---	---	10.0	8.5	9.5
23							---	---	---	10.5	9.5	10.0
24							---	---	---	11.0	10.0	10.5
25							9.0	7.5	8.0	11.5	10.5	11.0
26							9.5	8.0	8.5	12.0	11.0	11.5
27							9.0	8.5	8.5	12.5	11.5	12.0
28							10.0	8.5	9.0	12.5	12.5	12.5
29							10.0	8.5	9.0	15.5	12.5	14.5
30							10.0	8.5	9.0	15.0	13.0	13.5
31							---	---	---	14.0	13.0	13.5
MONTH							10.0	7.5	8.5	15.5	7.5	10.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.5	14.0	14.0				---	---	---	17.0	15.5	16.0
2	14.5	13.5	14.0				---	---	---	17.0	15.5	16.0
3	14.5	14.0	14.0				---	---	---	16.5	15.5	15.5
4	14.5	14.0	14.0				---	---	---	17.0	15.5	16.0
5	14.5	13.0	14.0				---	---	---	17.0	15.0	15.5
6	14.5	14.0	14.5				---	---	---	17.0	15.5	16.0
7	15.0	13.5	14.5				---	---	---	17.0	15.5	16.0
8	14.5	13.5	14.0				---	---	---	16.0	15.5	15.5
9	15.0	14.0	14.5				---	---	---	17.0	15.0	16.0
10	15.0	14.5	14.5				---	---	---	16.5	15.0	15.5
11	15.5	14.0	14.5				---	---	---	16.0	15.5	15.5
12	15.5	14.5	15.0				---	---	---	19.0	15.5	16.0
13	15.5	14.5	15.0				---	---	---	17.5	15.5	16.0
14	---	---	---				---	---	---	17.0	15.5	16.0
15	---	---	---				15.5	15.0	15.0	16.5	16.0	16.0
16	---	---	---				15.5	15.0	15.5	16.0	15.5	16.0
17	---	---	---				16.0	15.5	15.5	16.5	15.5	16.0
18	---	---	---				16.0	15.5	15.5	16.5	16.0	16.0
19	---	---	---				16.0	15.5	16.0	17.0	16.0	16.0
20	---	---	---				17.0	16.0	16.0	16.5	16.0	16.0
21	---	---	---				17.0	16.0	16.5	16.5	15.5	16.0
22	---	---	---				17.0	16.0	16.5	17.0	16.0	16.0
23	---	---	---				17.5	15.5	16.5	16.0	15.5	16.0
24	---	---	---				17.0	15.5	16.0	17.0	15.5	16.0
25	---	---	---				16.5	16.0	16.0	16.5	15.5	16.0
26	---	---	---				17.5	16.0	16.5	16.5	15.5	16.0
27	---	---	---				17.5	16.0	16.5	16.5	15.5	16.0
28	17.5	16.0	16.5				17.0	16.0	16.5	16.0	15.5	15.5
29	17.5	16.0	16.5				17.0	16.5	16.5	16.5	15.5	15.5
30	17.0	12.5	15.0				---	---	---	16.0	15.0	15.5
31	---	---	---				---	---	---	---	---	---
MONTH	17.5	12.5	14.5				17.5	15.0	16.0	19.0	15.0	16.0

01450500 AQUASHICOLA CREEK AT PALMERTON, PA

LOCATION.--Lat 40°48'22", long 75°35'54", Carbon County, Hydrologic Unit 02040106, on right bank 1,200 ft (370 m) upstream from Sixth Street Bridge in Palmerton, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--76.7 mi^2 (198.7 km^2).

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1051: 1940-45 (monthly net diversion), drainage area. WDR PA-68: 1967 (monthly net diversion).

GAGE.--Water-stage recorder. Datum of gage is 389.08 ft (118.592 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Regulation at low flow by mills above station. Occasional diversion from Pohopoco Creek into Aquashicola Creek above station . Figures of daily discharge do not include water diverted above station from Aquashicola Creek by the New Jersey Zinc Co.

AVERAGE DISCHARGE.--39 years, 153 ft^3/s (4.33 m^3/s), 27.09 in/yr (688 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s (331 m^3/s) July 10, 1945, gage height, 13.63 ft (4.154 m), from rating curve extended above 2,500 ft^3/s (71 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 2.6 ft^3/s (0.074 m^3/s) Sept. 12, 1957, from rating curve extended below 16 ft^3/s (0.45 m^3/s); minimum gage height, 2.44 ft (0.74 m) Sept. 16, 1964; minimum daily discharge, 9.1 ft^3/s (0.26 m^3/s) Sept. 15, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28.3 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 17	0545	1,490	42.2	6.36	1.939	Mar. 14	2045	1,420	40.2	6.24	1.902
Dec. 21	2300	1,420	40.2	6.24	1.902	Mar. 27	1900	2,110	59.8	7.26	2.213
Jan. 9	1215	*2,290	64.9	*7.50	2.286	May 15	0145	1,040	29.5	5.64	1.719

Minimum discharge, 25 ft^3/s (0.71 m^3/s) Sept. 8, gage height, 2.76 ft (0.841 m); minimum daily, 27 ft^3/s (0.76 m^3/s) Sept. 7, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	116	714	234	226	82	439	105	240	78	55	54
2	228	116	665	217	206	80	366	103	198	78	41	48
3	196	110	482	193	183	76	309	101	185	95	42	42
4	160	110	377	178	160	80	283	99	185	118	210	40
5	133	105	332	162	148	75	264	107	160	93	50	33
6	118	100	329	153	145	73	234	107	143	84	70	28
7	103	250	277	143	155	73	226	99	138	78	120	27
8	89	570	231	214	141	73	203	97	165	76	165	34
9	234	520	220	1620	131	73	185	141	196	73	127	80
10	329	450	198	993	127	75	170	118	167	69	101	42
11	246	600	172	576	122	76	165	113	150	76	107	37
12	196	486	160	424	120	85	155	111	136	73	116	35
13	160	377	160	356	116	105	145	111	138	63	160	30
14	155	309	212	332	113	532	136	532	129	65	136	27
15	258	264	380	280	109	740	131	882	113	69	116	31
16	322	237	424	240	105	499	127	622	109	63	97	34
17	1270	226	391	217	103	303	122	755	105	61	84	33
18	694	217	428	214	101	226	118	802	105	58	71	31
19	503	183	470	188	99	255	122	636	99	55	65	143
20	398	160	416	175	93	346	165	490	95	55	58	113
21	326	153	871	172	93	398	141	394	95	55	52	95
22	277	153	1120	153	89	545	127	326	129	48	49	103
23	237	153	679	141	89	541	122	274	107	37	52	89
24	206	148	511	133	85	511	122	353	97	36	48	82
25	185	138	541	185	84	424	118	398	95	34	49	80
26	175	336	507	1050	84	511	113	346	91	36	49	75
27	167	360	439	960	84	1620	113	306	91	36	57	71
28	145	306	370	580	82	1400	111	274	87	51	84	68
29	133	258	319	370	---	855	107	243	85	36	63	63
30	127	249	283	300	---	641	105	223	87	33	49	60
31	120	---	258	258	---	519	---	237	---	52	55	---
TOTAL	8050	7760	12936	11403	3393	11892	5244	9505	3920	1934	2598	1728
MEAN	260	259	417	368	121	384	175	307	131	62.4	83.8	57.6
MAX	1270	600	1120	1620	226	1620	439	882	240	118	210	143
MIN	89	100	160	133	82	73	105	97	85	33	41	27
≠	+0.2	-0.2	-0.6	-1.8	-2.2	-1.4	-0.7	-0.8	-0.3	+0.1	+0.2	+2.9
MEAN≠	260	259	416	366	119	383	174	306	131	62.5	84.0	60.5
CFSM≠	3.39	3.38	5.42	4.77	1.55	4.99	2.27	3.99	1.71	.81	1.10	.79
IN.≠	3.91	3.77	6.25	5.50	1.61	5.75	2.53	4.60	1.91	.93	1.27	.88

CAL YR 1977 TOTAL 68085 MEAN 187 MAX 1900 MIN 24 MEAN≠ 187 CFSM≠ 2.43 IN.≠ 32.93
WTR YR 1978 TOTAL 80363 MEAN 220 MAX 1620 MIN 27 MEAN≠ 220 CFSM≠ 2.87 IN.≠ 38.91

≠ Figures of net diversion, in cubic feet per second, include water from Pohopoco Creek to Aquashicola Creek plus water diverted above station from Aquashicola Creek, furnished by New Jersey Zinc Company.

≠ Adjusted for diversion.

01451000 LEHIGH RIVER AT WALNUTPORT, PA

LOCATION.--Lat 40°45'25", long 75°36'12", Northampton County, Hydrologic Unit 02040106, on left bank 0.3 mi (0.5 km) upstream from highway bridge at Walnutport, and 0.4 mi (0.6 km) upstream from Trout Creek. Water-quality sampling site 0.2 mi (0.3 km) downstream.

DRAINAGE AREA.--889 mi^2 (2,303 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 350.27 ft (106.762 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by Wild Creek Reservoir since January 1941, Penn Forest Reservoir since October 1958, Francis E. Walter Lake since February 1961, and Beltzville Lake since February 1971 (see p. 97).

AVERAGE DISCHARGE.--32 years, 1,860 ft^3/s (52.68 m^3/s), 28.41 in/yr (722 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 77,800 ft^3/s (2,200 m^3/s) Aug. 19, 1955, gage height, 17.68 ft (5.389 m); minimum, 57 ft^3/s (1.61 m^3/s) July 27, 1965, gage height, 1.25 ft (0.381 m), result of upstream shutoff.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Maximum stage known, 20.6 ft (6.28 m) May 23, 1942, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,100 ft^3/s (654 m^3/s) Jan. 9, gage height, 8.77 ft (2.673 m); minimum, 300 ft^3/s (8.50 m^3/s) Sept. 7, 8, gage height, 1.83 ft (0.558 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	2120	5620	2880	5070	840	6630	1260	2220	627	585	605
2	2350	2040	6170	2680	3730	850	5800	1220	1960	583	550	455
3	1670	2010	5190	2520	3350	840	5450	1190	1890	708	436	399
4	1280	2010	4470	2450	2640	840	7100	1060	1990	1380	490	383
5	1110	2120	3750	2220	2350	830	6680	1220	2080	1000	579	355
6	1040	2040	3730	2170	2350	840	6020	1310	1850	756	520	310
7	1020	3030	3390	2130	2350	810	4650	1510	1550	696	786	305
8	2450	7380	2860	2460	2260	810	4120	1510	1990	660	1910	329
9	3820	6020	2780	14400	1990	800	4140	1920	2860	638	1590	483
10	4350	6400	2700	7310	1800	800	3460	1650	2460	605	1070	375
11	3550	6960	2820	7630	1800	840	2920	1580	2210	561	1400	329
12	3170	6370	2620	8540	1700	900	2760	1510	1800	540	1580	323
13	2800	5810	1990	8630	1700	1060	2580	1530	1890	521	2120	310
14	2140	5270	2620	4830	1600	2790	2300	6750	1890	531	1310	336
15	3560	4670	4800	4300	1500	5080	1940	9080	1750	583	1060	399
16	3790	3550	5560	3840	1420	4130	1840	8560	1420	583	926	415
17	8770	3390	4620	3480	1400	3280	1790	9690	1220	550	840	399
18	7060	3330	4750	3460	1300	2820	1740	9930	1220	512	780	355
19	9250	2880	4900	3070	1200	2790	1750	10400	1220	474	780	1200
20	7630	2720	4800	2540	1100	3270	2060	9210	1110	455	720	1790
21	8140	2500	7270	2260	1050	3590	2150	8140	1090	447	627	1160
22	7240	2240	7980	2080	965	5360	2170	7100	1200	419	583	926
23	6070	2190	6080	1990	960	6080	2010	5800	1000	386	483	1020
24	4150	2120	5220	1900	950	6440	1870	4530	888	383	355	744
25	3840	2030	5560	2120	930	5850	1500	5260	828	383	349	550
26	3620	2740	5590	9820	910	6350	1480	4660	852	379	349	512
27	3390	2880	5190	8050	870	13000	1500	3960	913	382	399	493
28	3010	2680	4400	7780	840	11300	1480	3480	888	424	627	483
29	2490	2460	3870	6780	---	9700	1340	3170	768	424	583	464
30	2440	2540	3350	6140	---	12300	1310	2760	756	402	616	561
31	2320	---	3050	5590	---	11300	---	2500	---	461	649	---
TOTAL	119820	104500	137700	146050	50085	126490	92540	133450	45763	17453	25652	16768
MEAN	3865	3483	4442	4711	1789	4080	3085	4305	1525	563	827	559
MAX	9250	7380	7980	14400	5070	13000	7100	10400	2860	1380	2120	1790
MIN	1020	2010	1990	1900	840	800	1310	1060	756	379	349	305
CFSM	4.35	3.92	5.00	5.30	2.01	4.59	3.47	4.84	1.72	.63	.93	.63
IN.	5.01	4.37	5.76	6.11	2.10	5.29	3.87	5.58	1.91	.73	1.07	.70

CAL YR 1977 TOTAL 875752 MEAN 2399 MAX 13100 MIN 275 CFSM 2.70 IN 36.65
WTR YR 1978 TOTAL 1016271 MEAN 2784 MAX 14400 MIN 305 CFSM 3.13 IN 42.53

01451000 LEHIGH RIVER AT WALNUTPORT, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, OCTOBER 1977 TO JULY 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
OCT 19...	1020	9813	9813	8710	70	--	8.0	11.1
NOV 21...	1105	9813	9813	2600	90	--	6.5	11.6
DEC 12...	1010	9813	9813	2660	110	--	.0	13.8
JAN 31...	1215	9813	9813	5590	90	--	.0	--
FEB 23...	0940	9813	9813	1160	140	--	.0	14.2
MAR 16...	0940	9813	9813	4230	110	6.7	2.5	11.6
APR 10...	1020	9813	9813	3500	70	6.9	6.5	11.9
MAY 24...	1310	9813	9813	4600	110	7.5	13.0	9.9
JUN 21...	1055	9813	9813	1081	160	7.6	20.0	9.2
JUL 20...	1315	9813	9813	452	130	7.8	25.0	9.7
AUG 30...	1315	9813	9813	616	200	--	--	--
SEP 20...	1305	9813	9813	1800	130	7.7	18.0	9.0

DATE	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	MAGNESIUM, DISSOLVED (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 19...	--	14	0	6.4	6.4	.0	.0	12	10
NOV 21...	--	34	0	8.0	--	3.8	--	12	24
DEC 12...	--	35	0	7.2	--	4.6	--	18	18
JAN 31...	--	15	0	6.4	--	.0	--	12	10
FEB 23...	--	46	0	9.6	--	6.0	--	24	24
MAR 16...	--	50	0	8.0	--	8.2	--	16	14
APR 10...	--	20	0	7.2	--	.5	--	14	12
MAY 24...	--	42	0	7.2	--	6.6	--	0	25
JUN 21...	--	44	0	9.6	--	5.5	--	20	25
JUL 20...	--	51	0	9.6	--	7.4	--	16	30
AUG 30...	6	42	0	12	--	2.5	--	22	30
SEP 20...	16	40	0	8.8	--	4.5	--	18	25

01451000 LEHIGH RIVER AT WALNUTPORT, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT 19...	8.0	156	--	1.0	.02	.09	.05	710
NOV 21...	8.0	62	--	.96	.02	.19	.13	250
DEC 12...	10	16	--	1.0	.03	.13	.10	210
JAN 31...	11	104	--	.90	.02	.10	.07	170
FEB 23...	13	150	--	.82	.02	.20	.07	190
MAR 16...	16	32	--	1.4	.02	.21	.07	850
APR 10...	9.0	76	--	.92	.01	.25	.49	150
MAY 24...	10	76	--	.98	.02	.25	.09	320
JUN 21...	15	156	--	.85	.03	.30	<.10	250
JUL 20...	10	114	--	.90	.03	.21	.05	120
AUG 30...	17	128	20	.96	.03	.15	.13	130
SEP 20...	16	102	56	.91	.03	.16	.26	1570

DATE	TIME	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	CYANIDE TOTAL (MG/L AS CN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 21...	1105	.7	.01	<10	360	--	10	10	<50	190	40	370
FEB 23...	0940	.8	.01	<.01	280	--	<10	<10	<50	190	<10	240
MAY 24...	1310	2.0	.00	<.01	300	--	10	10	<50	190	<10	410
AUG 30...	1315	<.4	.01	.01	200	10	<10	20	<50	160	10	570

01451500 LITTLE LEHIGH CREEK NEAR ALLENTOWN, PA

LOCATION.--Lat 40°34'56", long 75°29'00", Lehigh County, Hydrologic Unit 02040106, on right bank at downstream side of bridge on Lehigh Parkway in Allentown, 0.8 mi (1.3 km) upstream from Cedar Creek, and 2.9 mi (4.7 km) upstream from mouth.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.--80.8 mi² (209.3 km²).

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1946, published as "at Allentown".

REVISED RECORDS.--WDR PA-73: 1946(M), 1951(P), 1955(M), 1956(M), 1958(M), 1962(M), 1963(M), 1965(M), 1969(M), 1971(M).

GAGE.--Water-stage recorder and, since September 1958, masonry control. Datum of gage is 253.41 ft (77.239 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation at low flow by fish hatchery above station.

AVERAGE DISCHARGE.--33 years, 97.5 ft³/s (2.761 m³/s), 16.39 in/yr (416 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) June 22, 1972, gage height, 11.80 ft (3.597 m), from rating curve extended above 980 ft³/s (27.8 m³/s) on basis of slope-area measurement of peak flow; minimum, 17 ft³/s (0.48 m³/s) Feb. 4, 1965, gage height, 1.84 ft (0.561 m), result of upstream shutoff; minimum gage height, 1.39 ft (0.424 m) June 17, 18, 22, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 450 ft³/s (12.7 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 16	2300	886	25.1	4.02	1.225	Mar. 15	0100	1,550	43.9	4.73	1.442
Nov. 8	0330	567	16.1	3.51	1.070	Mar. 16	0045	822	23.3	3.94	1.201
Dec. 1	0515	483	13.7	3.43	1.045	Mar. 27	1100	1,250	35.4	4.43	1.350
Dec. 21	1430	657	18.6	3.71	1.131	May 14	1245	573	16.2	3.50	1.067
Jan. 9	0800	1,120	31.7	4.29	1.308	Aug. 28	2145	604	17.1	3.63	1.106
Jan. 26	1600	*6,060	172	*8.36	2.548						

Minimum discharge, 57 ft³/s (1.61 m³/s) Oct. 5, 6, 8, 9, gage height. 2.28 ft (0.695 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	76	370	192	199	119	214	135	141	95	100	110
2	78	75	272	186	192	118	195	135	138	95	90	93
3	66	75	192	175	184	120	181	132	156	182	86	86
4	61	83	166	167	174	120	188	132	179	225	95	83
5	59	80	192	169	168	112	185	144	141	135	93	81
6	59	77	240	169	172	110	170	141	132	115	90	81
7	58	186	176	167	164	106	172	135	132	108	144	79
8	57	370	153	202	165	107	158	132	141	100	169	79
9	112	232	153	618	160	105	144	182	132	98	108	79
10	95	158	139	284	157	108	146	144	124	102	98	77
11	71	198	135	210	155	110	142	132	121	100	95	77
12	65	147	131	192	153	116	139	127	118	93	113	77
13	62	129	136	181	149	137	125	124	135	90	113	79
14	76	118	195	206	149	410	115	356	124	90	93	75
15	169	116	256	182	143	818	107	260	115	121	88	77
16	225	113	176	161	139	410	105	240	113	102	86	77
17	281	118	158	160	139	172	103	328	113	124	86	75
18	120	132	264	206	139	141	103	284	113	102	81	90
19	113	112	324	185	137	158	120	225	110	93	79	162
20	108	106	252	162	132	214	221	195	105	90	79	93
21	93	105	495	157	134	217	192	175	118	88	77	83
22	88	106	483	149	130	350	169	162	156	88	77	88
23	85	128	342	143	130	302	156	156	121	86	75	81
24	82	120	284	141	129	284	156	256	108	83	75	77
25	81	113	346	221	128	240	150	264	105	83	75	77
26	83	244	302	2930	125	385	147	182	102	83	75	75
27	84	150	232	678	119	845	147	166	105	83	86	73
28	80	130	214	370	119	448	144	159	100	93	162	73
29	78	124	199	281	---	320	141	153	100	83	172	70
30	77	139	199	240	---	256	138	150	108	83	98	70
31	76	---	195	217	---	232	---	144	---	105	102	---
TOTAL	2908	4060	7371	9701	4184	7690	4573	5650	3706	3218	3060	2497
MEAN	93.8	135	238	313	149	248	152	182	124	104	98.7	83.2
MAX	281	370	495	2930	199	845	221	356	179	225	172	162
MIN	57	75	131	141	119	105	103	124	100	83	75	70
CFSM	1.16	1.67	2.95	3.87	1.84	3.07	1.88	2.25	1.54	1.29	1.22	1.03
IN.	1.34	1.87	3.39	4.47	1.93	3.54	2.11	2.60	1.71	1.48	1.41	1.15

CAL YR 1977 TOTAL 41702 MEAN 114 MAX 607 MIN 51 CFSM 1.41 IN 19.20
WTR YR 1978 TOTAL 58618 MEAN 161 MAX 2930 MIN 57 CFSM 1.99 IN 26.99

01451500 LITTLE LEHIGH CREEK NEAR ALLENTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources

WATER QUALITY DATA, NOVEMBER 1977 TO MAY 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)
NOV 16...	1315	9813	9813	116	370	--	10.0	10.8	170	0	38	20
FEB 27...	1240	9813	9813	119	350	--	6.0	14.4	170	--	34	23
MAY 24...	1120	9813	9813	264	340	7.9	13.0	8.6	145	0	30	18
AUG 29...	1110	9813	9813	159	260	8.0	18.5	8.1	88	0	23	7.5
SEP 18...	1225	9813	9813	73	--	--	--	--	--	--	--	--

DATE	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
NOV 16...	128	24	13	240	4	3.7	.03	.09	.08	150	<10
FEB 27...	130	20	15	98	--	4.1	.02	.10	.05	90	10
MAY 24...	108	18	13	208	--	2.8	.03	.13	.04	1070	40
AUG 29...	82	15	10	176	--	2.5	.05	.18	.47	10650	270
SEP 18...	--	--	--	--	--	--	--	--	--	60	20

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
AUG 29...	1110	--	<3	10	20	<50	10	40
SEP 18...	1225	<20	<3	<10	30	<50	<10	10

01451800 JORDAN CREEK NEAR SCHNECKSVILLE, PA

LOCATION.--Lat 40°39'42", long 75°37'38", Lehigh County, Hydrologic Unit 02040106, on left bank 54 ft (16.5 m) downstream from wooden covered bridge at Trexler-Lehigh County Game Preserve, 1.0 mi (1.6 km) downstream from Mill Creek, and 1.1 mi (1.8 km) southwest of Schnecksville.

DRAINAGE AREA.--53.0 mi² (137.3 km²).

PERIOD OF RECORD.--February 1966 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 400 ft (122 m), from topographic map. Prior to Oct. 2, 1973, nonrecording gage at bridge 54 ft (16.5 m) upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--12 years, 95.4 ft³/s (2.702 m³/s), 24.44 in/yr (621 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,100 ft³/s (201 m³/s) June 22, 1972, gage height, 12.32 ft (3.755 m), from floodmark, from rating curve extended above 680 ft³/s (19.3 m³/s) on basis of contracted-opening measurement of peak flow; minimum observed, 0.4 ft³/s (0.011 m³/s) July 26, 1966; minimum gage height observed, 1.74 ft (0.530 m) July 19, 26, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 19	1615	657	18.6	4.76	1.451	Mar. 14	1930	1,930	54.7	6.93	2.112
Oct. 17	0715	1,020	28.9	5.48	1.670	Mar. 15	1800	1,420	40.2	6.16	1.878
Nov. 8	0700	1,330	37.7	6.02	1.835	Mar. 19	1945	720	20.4	4.90	1.494
Dec. 1	0730	840	23.8	5.14	1.567	Mar. 27	1500	1,360	38.5	6.06	1.847
Dec. 18	1715	643	18.2	4.73	1.442	May 14	1445	865	24.5	5.19	1.582
Dec. 21	1845	1,410	39.9	6.15	1.875	May 17	1830	745	21.1	4.95	1.509
Jan. 9	0915	1,540	43.6	6.37	1.942	Aug. 8	0215	1,080	30.6	5.58	1.701
Jan. 26	1115	*3,420	96.9	*8.86	2.701						

Minimum discharge, 14 ft³/s (0.396 m³/s) July 30, 31, Sept. 14, 15, gage height, 2.65 ft (0.808 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	50	666	109	120	30	178	38	63	19	27	43
2	155	48	504	93	95	30	142	37	55	17	20	26
3	126	50	327	82	80	30	124	36	67	78	17	22
4	107	76	235	73	69	36	124	34	81	109	22	20
5	88	55	232	67	59	32	116	48	50	59	23	19
6	81	48	261	65	52	33	97	44	43	43	27	18
7	69	306	210	61	74	31	99	37	48	36	309	16
8	59	1050	181	158	74	30	83	37	61	32	598	18
9	271	571	150	1040	57	30	71	109	57	29	229	20
10	292	372	120	504	53	32	65	57	41	28	144	16
11	216	384	105	324	53	38	63	46	36	26	172	17
12	161	288	95	238	50	69	63	43	32	23	137	16
13	126	226	107	178	46	204	53	44	37	20	97	16
14	142	181	195	187	46	830	48	475	32	20	74	14
15	258	153	324	147	43	1050	46	499	28	46	61	18
16	309	129	295	116	40	495	43	439	27	37	53	22
17	830	131	248	99	41	232	41	702	26	38	46	22
18	463	126	388	158	38	169	38	598	27	29	40	29
19	368	99	603	150	36	306	59	499	27	25	36	295
20	261	88	495	90	33	380	137	331	23	22	32	137
21	210	85	1010	84	32	349	102	242	29	20	29	97
22	172	90	892	81	31	407	88	178	51	20	27	99
23	142	116	483	77	30	313	76	144	29	18	26	76
24	119	109	309	74	31	271	69	216	23	16	24	63
25	104	102	331	207	33	201	63	184	22	18	24	55
26	104	320	235	2230	33	392	57	134	21	18	24	46
27	102	275	216	657	32	1140	53	119	23	16	22	43
28	81	223	184	299	29	760	50	107	20	22	34	38
29	67	178	155	232	---	439	44	97	22	16	44	34
30	61	184	139	187	---	288	41	85	27	15	25	32
31	55	---	121	153	---	219	---	74	---	33	40	---
TOTAL	5718	6113	9816	8220	1410	8866	2333	5733	1128	948	2483	1387
MEAN	184	204	317	265	50.4	286	77.8	185	37.6	30.6	80.1	46.2
MAX	830	1050	1010	2230	120	1140	178	702	81	109	598	295
MIN	55	48	95	61	29	30	38	34	20	15	17	14
CFSM	3.47	3.85	5.98	5.00	.95	5.40	1.47	3.49	.71	.58	1.51	.87
IN.	4.01	4.29	6.89	5.77	.99	6.22	1.64	4.02	.79	.67	1.74	.97

CAL YR 1977 TOTAL 42941.4 MEAN 118 MAX 1050 MIN 6.3 CFSM 2.23 IN 30.14
WTR YR 1978 TOTAL 54155.0 MEAN 148 MAX 2230 MIN 14 CFSM 2.79 IN 38.01

01452000 JORDAN CREEK AT ALLENTOWN, PA

LOCATION.--Lat 40°37'23", long 75°28'58", Lehigh County, Hydrologic Unit 02040106, on right bank 200 ft (60 m) upstream from bridge on State Highway 145, 0.5 mi (0.8 km) northwest of city limits of Allentown, and 2.5 mi (4.0 km) upstream from mouth. Water-quality sampling site at bridge 200 ft (60 m) downstream.

DRAINAGE AREA.--75.8 mi² (196.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year.

REVISED RECORDS.--WDR PA-76-1: 1970(M), 1971.

GAGE.--Water-stage recorder and rubble masonry control, crest raised one foot (0.3 m) in August 1958 and further modified by filling in square notches on sides and notching center of dam at 17:1 slope in August 1974. Datum of gage is 259.82 ft (79.193 m) Pennsylvania Department of Transportation datum.

REMARKS.--Records good. Some regulation at low flow by mills above station.

AVERAGE DISCHARGE.--34 years, 113 ft³/s (3.200 m³/s), 20.24 in/yr (514 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,200 ft³/s (459 m³/s) June 23, 1972, gage height, 11.61 ft (3.539 m), from floodmark, from rating curve extended above 6,100 ft³/s (173 m³/s) on basis of slope-area measurement of peak flow; no flow on many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1942, reached a stage of approximately 7.1 ft (2.16 m) outside, from floodmarks 650 ft (200 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum(*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft³/s)	(m³/s)	(ft)	(m)			(ft³/s)	(m³/s)	(ft)	(m)
Nov. 8	1115	1,540	43.6	5.17	1.576	Mar. 14	2345	2,260	64.0	5.71	1.740
Dec. 21	2300	1,870	53.0	5.44	1.658	Mar. 15	1000	1,630	46.2	5.24	1.600
Jan. 9	1500	1,880	53.2	5.45	1.661	Mar. 27	1845	1,690	47.9	5.29	1.612
Jan. 26	1615	*4,800	136	*6.98	2.128						

Minimum discharge, 15 ft³/s (0.42 m³/s) Mar. 5, gage height, 2.36 ft (0.719 m), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	70	803	130	120	38	240	63	95	29	53	73
2	217	65	719	110	100	37	203	62	84	24	34	41
3	159	62	481	90	90	37	168	59	91	52	28	34
4	138	86	340	86	80	38	168	56	119	172	27	29
5	119	75	290	102	76	35	162	68	81	86	31	26
6	107	63	376	100	74	35	135	73	70	66	30	25
7	97	270	296	95	72	34	138	63	65	56	228	22
8	84	1070	230	117	93	35	119	57	93	48	818	25
9	231	733	190	1240	79	34	107	117	77	44	352	26
10	388	488	160	740	72	36	100	86	72	39	210	23
11	280	537	140	424	68	40	100	68	57	38	207	21
12	217	406	132	285	66	57	100	62	52	35	217	22
13	172	318	153	231	63	147	86	62	57	31	144	21
14	156	240	179	245	63	663	79	430	56	29	117	19
15	358	203	442	186	59	1350	73	649	48	66	93	19
16	346	172	370	135	54	754	70	488	44	60	82	26
17	994	165	323	130	57	318	66	834	41	91	73	34
18	642	175	424	193	56	217	66	761	41	59	63	30
19	454	130	747	165	52	270	75	649	39	45	56	340
20	346	114	663	100	45	495	165	436	38	38	52	207
21	260	109	1150	94	44	448	130	312	39	34	45	141
22	214	114	1320	89	43	530	112	231	72	31	41	144
23	175	132	691	86	42	436	100	189	53	28	39	117
24	147	130	442	83	43	382	95	240	38	25	36	97
25	130	125	442	168	45	285	91	250	34	23	35	84
26	122	376	329	2680	45	388	84	182	32	24	35	73
27	132	388	255	1040	43	1390	81	159	33	23	37	65
28	104	301	221	430	39	1040	77	144	30	24	43	62
29	88	235	193	265	---	607	70	130	27	25	70	54
30	79	224	175	200	---	400	66	122	35	21	40	49
31	75	---	159	156	---	301	---	107	---	35	43	---
TOTAL	7122	7576	12835	10195	1783	10877	3326	7209	1713	1401	3379	1949
MEAN	230	253	414	329	63.7	351	111	233	57.1	45.2	109	65.0
MAX	994	1070	1320	2680	120	1390	240	834	119	172	818	340
MIN	75	62	132	83	39	34	66	56	27	21	27	19
CFSM	3.03	3.34	5.46	4.34	.84	4.63	1.46	3.07	.75	.60	1.44	.86
IN.	3.50	3.72	6.30	5.00	.88	5.34	1.63	3.54	.84	.69	1.66	.96

CAL YR 1977 TOTAL 59042.0 MEAN 162 MAX 1890 MIN 8.3 CFSM 2.14 IN 28.98
WTR YR 1978 TOTAL 69365.0 MEAN 190 MAX 2680 MIN 19 CFSM 2.51 IN 34.04

01452000 JORDAN CREEK AT ALLENTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, NOVEMBER 1977 TO MAY 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)
NOV 16...	1245	9813	9813	290	250	--	8.5	10.6	98	0	23	11
FEB 27...	1155	9813	9813	29	400	--	3.0	12.8	152	0	36	17
MAY 24...	1155	9813	9813	228	250	7.8	14.5	8.6	100	0	21	12
AUG 29...	1010	9813	9813	79	370	7.6	22.0	7.7	93	0	27	6.5

DATE	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
NOV 16...	44	34	12	186	6	4.4	.02	.13	.05	140	30
FEB 27...	88	72	18	202	--	3.5	.07	.20	.06	130	70
MAY 24...	46	32	6.0	130	--	3.2	.05	.22	.09	310	40
AUG 29...	84	35	18	208	--	2.5	.06	.10	.09	730	60

DATE	TIME	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
AUG 29...	1010	<3	<10	20	<50	<10	<10

01452150 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'52", long 75°23'05", Northampton County, Hydrologic Unit 02040106, at bridge on State Route 378 in Bethlehem, 0.65 mi (1.0 km) upstream from Monocacy Creek.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 18...	1220	9813	9813	120	--	8.5	12.8	40	0	12	13
NOV 21...	1335	9813	9813	150	--	7.5	11.6	58	0	12	--
DEC 08...	1215	9813	9813	170	--	2.0	12.5	64	0	15	--
FEB 27...	1015	9813	9813	220	--	2.5	12.1	94	0	22	--
MAR 15...	1310	9813	9813	160	7.6	4.0	12.8	48	0	13	--
APR 05...	1150	9813	9813	130	7.6	7.5	11.8	40	0	8.8	--
MAY 23...	1410	9813	9813	130	7.7	16.0	9.5	50	0	9.6	--
JUN 20...	1155	9813	9813	260	7.8	23.0	8.2	76	0	16	--
JUL 18...	0955	9813	9813	350	7.9	26.0	9.4	113	0	35	--
AUG 24...	1200	9813	9813	360	7.5	21.5	8.9	111	0	30	--
SEP 21...	1115	9813	9813	230	7.8	18.5	9.1	60	0	17	--

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 18...	2.0	2.0	20	10	10	26	1.9	.02	.12	.12	1090
NOV 21...	7.2	--	34	24	13	118	1.5	.02	.42	.20	210
DEC 08...	7.1	--	36	26	15	94	1.9	.04	.20	.20	240
FEB 27...	10	--	56	28	18	280	1.9	.03	.49	.21	170
MAR 15...	3.8	--	28	20	25	116	1.9	.04	.44	.48	7300
APR 05...	4.9	--	22	15	12	78	1.2	.03	.18	.21	300
MAY 23...	7.1	--	22	15	12	30	1.1	.03	.20	.26	290
JUN 20...	9.3	--	50	40	17	180	1.4	.04	.25	.20	160
JUL 18...	6.8	--	82	20	22	236	2.0	.08	.78	.37	140
AUG 24...	9.0	--	76	35	26	230	2.0	.06	.55	.50	150
SEP 21...	4.0	--	46	25	17	166	1.5	.07	.18	.28	840

DATE	TIME	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 21...	1335	.7	.01	2	.00	--	<10	<10	<50	130	10	140
FEB 27...	1015	1.0	.00	1	.04	--	<10	10	<50	130	10	130
MAY 23...	1410	1.8	.00	<2	.02	--	<10	<10	<50	140	<10	110
AUG 24...	1200	3.2	.01	12	.08	<3	<10	40	50	70	20	70

01452500 MONOCACY CREEK AT BETHLEHEM, PA

LOCATION.--Lat 40°38'28", long 75°22'47", Northampton County, Hydrologic Unit 02040106, on right bank 40 ft (12 m) downstream from highway bridge at entrance to Monocacy Park at Bethlehem, and 2.1 mi (3.4 km) upstream from mouth.

DRAINAGE AREA.--44.5 mi^2 (115.3 km^2).

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Concrete control since July 17, 1969. Datum of gage is 247.24 ft (75.359 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to May 15, 1962, nonrecording gage at site 40 ft (12 m) upstream at same datum.

REMARKS.--Records fair. Some regulation at low flow by mill above station since April 1954.

AVERAGE DISCHARGE.--30 years, 51.8 ft^3/s (1.467 m^3/s), 15.81 in/yr (402 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,340 ft^3/s (66.3 m^3/s) Feb. 28, 1958, gage height, 7.63 ft (2.326 m), from rating curve extended above 560 ft^3/s (15.9 m^3/s) on basis of slope-area measurement at gage height 9.74 ft (2.969 m); minimum, 3.0 ft^3/s (0.085 m^3/s) Jan. 9, 1966, gage height, 1.67 ft (0.509 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of July 10, 1945, reached a stage of 9.74 ft (2.969 m), from floodmarks, discharge, 5,200 ft^3/s (147 m^3/s), by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s (8.50 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 21	2000	334	9.45	3.56	1.050	Mar. 15	2200	649	18.4	4.32	1.317
Jan. 9	1215	467	13.2	3.90	1.189	Mar. 27	1630	608	17.2	4.23	1.289
Jan. 26	1500	*2,320	65.7	*6.90	2.103	Aug. 7	2115	360	10.2	3.62	1.103
Mar. 14	2315	755	21.4	4.55	1.387	Aug. 13	0515	326	9.23	3.52	1.073

Minimum discharge, 32 ft^3/s (0.91 m^3/s) Nov. 7, gage height, 2.32 ft (0.707 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	39	168	85	110	58	144	65	69	49	41	60
2	69	35	145	81	100	58	125	65	65	48	37	53
3	52	34	120	75	97	63	116	65	88	63	36	53
4	50	38	101	70	95	64	120	62	77	75	40	53
5	46	36	101	71	94	62	115	65	67	58	41	50
6	40	36	106	69	98	62	105	64	66	48	59	49
7	38	86	88	68	93	60	103	62	72	48	133	49
8	38	154	80	79	91	56	97	61	72	48	168	51
9	72	134	77	301	90	54	93	78	69	46	89	70
10	73	114	68	184	87	55	92	69	67	48	72	51
11	72	116	64	148	83	54	90	66	61	46	116	50
12	58	94	61	123	81	64	89	62	57	41	101	49
13	52	90	67	115	79	102	86	59	70	40	190	47
14	56	88	91	120	82	306	82	121	62	40	135	46
15	97	81	117	101	81	447	79	111	58	46	107	46
16	92	72	107	90	79	239	75	112	57	41	95	50
17	156	75	103	88	79	145	75	139	55	45	87	46
18	135	72	118	95	77	122	75	164	55	43	75	44
19	132	61	126	85	73	139	77	155	55	38	70	88
20	107	66	124	77	69	165	98	130	51	38	66	58
21	93	62	235	75	69	163	86	115	63	40	61	56
22	92	61	289	74	67	177	77	105	63	39	58	54
23	78	64	188	73	65	156	77	99	51	38	56	53
24	65	62	148	73	64	143	75	122	49	37	56	52
25	62	59	159	112	63	125	75	118	48	37	54	50
26	60	118	126	1200	74	155	73	103	48	36	53	49
27	58	103	113	392	69	477	72	98	48	36	58	50
28	53	93	106	210	62	343	69	102	48	37	72	50
29	45	85	97	169	---	226	68	89	49	34	61	48
30	40	84	92	144	---	181	67	75	56	33	54	47
31	38	---	89	120	---	158	---	72	---	43	62	---
TOTAL	2167	2312	3674	4767	2271	4679	2675	2873	1816	1359	2403	1572
MEAN	69.9	77.1	119	154	81.1	151	89.2	92.7	60.5	43.8	77.5	52.4
MAX	156	154	289	1200	110	477	144	164	88	75	190	88
MIN	38	34	61	68	62	54	67	59	48	33	36	44
CFSM	1.57	1.73	2.67	3.46	1.82	3.39	2.00	2.08	1.36	.98	1.74	1.18
IN.	1.81	1.93	3.07	3.98	1.90	3.91	2.24	2.40	1.52	1.14	2.01	1.31

CAL YR 1977 TOTAL 22062 MEAN 60.4 MAX 418 MIN 18 CFSM 1.36 IN 18.44
WTR YR 1978 TOTAL 32568 MEAN 89.2 MAX 1200 MIN 33 CFSM 2.00 IN 27.22

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, Hydrologic Unit 02040106, on left bank 110 ft (34 m) upstream from New Street Bridge at Bethlehem, and 1,800 ft (549 m) upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi² (3,313 km²) includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi² (3,183 km²).

PERIOD OF RECORD.--Sept. 1902 to February 1905, April 1909 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at South Bethlehem" prior to Oct. 1913.

REVISED RECORDS.--WSP 261: 1903-5. WSP 321: 1910-11. WSP 1051: Drainage area. WSP 1141: 1929-34(M). WSP 1302: 1914(M), 1916(M), 1918, 1921, 1927-28. WSP 1432: 1903, 1919(M), 1920-21, 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 210.94 ft (64.295 m) National Geodetic Vertical Datum of 1929. Prior to October 1928, nonrecording gage at New Street Bridge 120 ft (37 m) downstream at same datum. Oct. 1, 1928 to Sept. 30, 1962, water-stage recorder at site 4,250 ft (1,295 m) downstream at datum 2.49 ft (0.759 m) lower. Oct. 1, 1963 to Dec. 14, 1975, water-stage recorder at site 40 ft (12 m) downstream at same datum.

REMARKS.--Records good. Flow regulated by Wild Creek Reservoir since January 1941, Penn Forest Reservoir since October 1958, Francis E. Walter Reservoir since February 1961, and Beltzville Lake since February 1971 (see p. 97).

AVERAGE DISCHARGE.--71 years (1902-4, 1909 to current year), 2,339 ft³/s (66.24 m³/s), 24.83 in/yr (631 mm/yr), adjusted for diversion 1902-04, 1909-42 and, for recirculated water, October 1, 1959 to September 30, 1962.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92,000 ft³/s (2,610 m³/s) May 23, 1942, gage height, about 25.9 ft (7.89 m), from floodmark, present site and datum, from rating curve extended above 48,000 ft³/s (1,360 m³/s); minimum, 125 ft³/s (3.54 m³/s) June 28, 1965, gage height, 0.94 ft (0.287 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1902, reached a stage of 24.9 ft (7.59 m), from floodmark, present site and datum, discharge, about 88,000 ft³/s (2,490 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,600 ft³/s (952 m³/s) Jan. 26, gage height, 12.64 ft (3.853 m); minimum discharge, 601 ft³/s (17.0 m³/s) July 24; minimum gage height, 1.35 ft (0.411 m) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2780	2600	7520	3760	6050	1410	9130	1850	3010	1080	1040	1220
2	3280	2520	8530	3560	4700	1400	6880	1780	2690	1040	1000	948
3	2320	2520	6940	3260	4260	1410	6350	1750	2690	2200	811	826
4	1880	2580	5860	3000	3580	1400	7800	1630	2820	2700	900	798
5	1610	2630	4950	3000	3110	1250	7680	1730	2730	2000	975	769
6	1510	2530	5220	2950	3090	1280	6910	1930	2520	1310	1000	699
7	1450	3930	4580	2900	2790	1270	5700	2000	2190	1190	1780	657
8	2360	10300	3950	3130	3070	1330	4970	2090	2610	1120	3760	727
9	4310	8480	3780	18200	2710	1280	4810	2690	3180	1080	2540	886
10	5580	7900	3470	10700	2520	1270	4330	2430	3160	1060	1910	841
11	4480	8730	3270	8920	2450	1280	3660	2170	2760	1000	2470	727
12	3980	7520	3150	9380	2450	1430	3520	2100	2430	930	3110	685
13	3620	6650	2960	10600	2340	1930	3320	2070	2430	900	2960	671
14	2950	5960	3520	6360	2280	4240	3030	6540	2460	900	2190	643
15	4740	5420	6220	5500	2160	10100	2670	12600	2250	1140	1760	798
16	4960	4460	6820	5220	2000	7500	2500	9760	2070	1050	1550	855
17	11300	4160	5810	4570	2020	4850	2450	12300	1750	1190	1350	826
18	8960	4210	6260	4610	1960	4280	2370	12200	1730	975	1270	812
19	10200	3660	7260	4230	1930	4350	2450	12400	1760	885	1200	2320
20	9040	3400	6010	3860	1760	5050	3090	10900	1640	825	1200	2560
21	9250	3220	9460	3300	1780	5070	3010	9480	1700	797	1050	1910
22	8180	2970	12300	2990	1650	6880	2940	8240	1930	755	1010	1680
23	7180	2990	8440	2810	1650	7530	2710	7100	1640	699	948	1600
24	4970	2890	6830	2730	1630	7880	2600	5710	1390	671	798	1380
25	4560	2780	7180	3290	1650	7060	2260	6680	1260	671	769	1040
26	4330	4200	6960	20300	1580	7680	2140	5700	1250	685	769	979
27	4280	4110	6340	14000	1510	18200	2140	4880	1340	671	826	948
28	3800	3780	5420	10000	1380	16700	2120	4330	1250	800	1220	932
29	3300	3460	4860	8330	---	11900	1980	3990	1170	685	1220	901
30	3000	3540	4350	7390	---	13500	1880	3560	1120	670	1050	855
31	2800	---	3970	6690	---	12600	---	3280	---	1200	1220	---
TOTAL	146960	134100	182190	199540	70060	173310	117400	165870	62930	32879	45656	31493
MEAN	4741	4470	5877	6437	2502	5591	3913	5351	2098	1061	1473	1050
MAX	11300	10300	12300	20300	6050	18200	9130	12600	3180	2700	3760	2560
MIN	1450	2520	2960	2730	1380	1250	1880	1630	1120	670	769	643
CFSM	3.71	3.50	4.60	5.03	1.96	4.37	3.06	4.18	1.64	.83	1.15	.82
IN.	4.27	3.90	5.30	5.80	2.04	5.04	3.41	4.82	1.83	.96	1.33	.92

CAL YR 1977 TOTAL 1150028 MEAN 3151 MAX 18100 MIN 545 CFSM 2.46 IN 33.45
WTR YR 1978 TOTAL 1362388 MEAN 3733 MAX 20300 MIN 643 CFSM 2.92 IN 39.63

01454510 SAUCON CREEK NEAR HELLERTOWN, PA

LOCATION.--Lat 40°33'26", long 75°21'44", Northampton County, Hydrologic Unit 02040106, at bridge on Legislative Route 48001, 0.1 mi (0.2 km) downstream from Lehigh-Northampton County line, 1.5 mi (2.4 km) southwest of Hellertown city limits and 2.0 mi (3.2 km) downstream from South Branch.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)
OCT									
18...	1305	9813	9813	350	--	12.5	12.7	137	0
NOV									
16...	1355	9813	9813	350	--	14.0	11.1	162	0
DEC									
08...	1255	9813	9813	330	--	8.0	11.8	150	0
FEB									
01...	1310	9813	9813	330	--	--	--	140	0
27...	1315	9813	9813	330	--	11.0	14.0	166	0
MAR									
15...	1350	9813	9813	240	7.9	6.0	11.7	80	0
APR									
05...	1250	9813	9813	340	9.0	14.0	12.5	120	0
MAY									
24...	1045	9813	9813	290	7.2	13.0	9.5	130	0
JUN									
20...	1300	9813	9813	380	8.6	19.5	11.4	152	--
JUL									
20...	1315	9813	9813	370	8.2	20.5	13.0	130	0
AUG									
29...	1000	9813	9813	360	8.1	16.0	9.3	126	0
SEP									
21...	1245	9813	9813	380	8.5	17.0	11.8	144	0

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT								
18...	32	33	13	14	114	30	9.0	222
NOV								
16...	36	--	19	--	122	32	8.0	230
DEC								
08...	32	--	19	--	118	38	8.0	180
FEB								
01...	34	--	14	--	110	42	13	194
27...	36	--	20	--	124	34	11	182
MAR								
15...	21	--	7.1	--	62	26	18	192
APR								
05...	35	--	8.8	--	106	42	11	242
MAY								
24...	28	--	16	--	88	32	10	180
JUN								
20...	35	--	17	--	130	50	8.0	250
JUL								
20...	36	--	16	--	130	35	8.0	250
AUG								
29...	38	--	7.5	--	116	30	8.0	216
SEP								
21...	42	--	9.5	--	132	35	8.0	214

01454510 SAUCON CREEK NEAR HELLERTOWN, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 18...	14	--	1.9	.06	.19	.10	290	230
NOV 16...	<10	234	1.8	.05	.11	.07	140	160
DEC 08...	6	186	1.8	.05	.10	.10	100	120
FEB 01...	28	222	2.6	.06	.28	.10	140	140
27...	22	204	1.7	.03	.15	.11	80	70
MAR 15...	80	272	2.0	.05	.45	.56	70	430
APR 05...	16	--	1.6	.04	.17	.16	250	170
MAY 24...	68	248	1.6	.05	.24	.17	1630	490
JUN 20...	10	--	1.5	.05	.09	.10	110	180
JUL 20...	22	272	1.5	.04	.06	.13	80	100
AUG 29...	16	--	1.4	.04	.08	.12	620	220
SEP 21...	76	--	1.6	.05	.08	.10	80	90

DATE	TIME	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
AUG 29...	1000	20	20	<50	20	<10

01454653 SAUCON CREEK AT BETHLEHEM, PA

LOCATION.--Lat 40°36'27", long 75°20'24", Northampton County, Hydrologic Unit 02040106, at bridge on Legislative Route 48010 in Bethlehem, 1.2 mi (1.9 km) upstream from Lehigh River and 2.2 mi (3.5 km) downstream from Black River.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)
OCT 18...	1135	9813	9813	330	--	10.0	12.6	136	0	36
NOV 21...	1255	9813	9813	360	--	10.0	11.0	160	0	38
DEC 08...	1125	9813	9813	350	--	4.0	13.1	158	0	34
FEB 01...	1150	9813	9813	340	--	--	--	146	0	35
27...	0955	9813	9813	330	--	6.0	14.0	162	0	34
MAR 15...	1240	9813	9813	270	8.0	6.5	11.9	90	0	24
APR 05...	1120	9813	9813	320	8.8	12.0	12.4	118	0	29
MAY 23...	1320	9813	9813	340	8.8	17.0	11.7	144	0	32
JUN 20...	1125	9813	9813	380	8.4	18.5	10.5	132	0	36
JUL 18...	0955	9813	9813	390	7.5	19.5	11.5	168	0	41
AUG 24...	0945	9813	9813	410	8.1	16.0	11.4	178	0	41
SEP 21...	1155	9813	9813	390	8.0	17.0	11.9	145	0	42

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 18...	37	11	11	112	30	10	230	--	--
NOV 21...	--	23	--	124	40	9.0	210	--	--
DEC 08...	--	19	--	122	40	9.0	226	--	--
FEB 01...	--	15	--	116	36	13	6	--	--
27...	--	20	--	122	34	14	84	--	--
MAR 15...	--	8.2	--	72	30	20	218	--	--
APR 05...	--	12	--	98	44	16	184	--	--
MAY 23...	--	17	--	116	36	11	140	--	--
JUN 20...	--	13	--	132	55	10	270	--	--
JUL 18...	--	17	--	132	25	8.0	246	6	252
AUG 24...	--	18	--	134	35	8.0	266	--	--
SEP 21...	--	10	--	132	30	9.0	238	--	--

01454653 SAUCON CREEK AT BETHLEHEM, PA-Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)
OCT									
18...	1.9	.06	.13	.20	570	--	270	--	--
NOV									
21...	1.7	.04	.10	.21	100	10	80	.01	<1
DEC									
08...	1.9	.05	.07	.09	150	--	--	--	--
FEB									
01...	2.4	.04	.20	.09	110	--	50	--	--
27...	1.9	.04	.15	.11	130	20	80	.00	1
MAR									
15...	2.2	.05	.32	.18	3300	--	290	--	--
APR									
05...	2.0	.04	.13	.14	440	--	140	--	--
MAY									
23...	1.7	.04	.10	.13	120	20	40	.00	<2
JUN									
20...	1.6	.06	.08	.10	120	--	--	--	--
JUL									
18...	1.5	.03	.05	.29	200	--	50	--	--
AUG									
24...	1.7	.03	.06	.18	250	20	100	.01	10
SEP									
21...	1.7	.05	.07	.13	130	--	--	--	--

DATE	TIME	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
AUG						
24...	0945	<3	10	10	<50	<10

01454700 LEHIGH RIVER AT GLENDON, PA

LOCATION.--Lat 40°40'09", long 75°14'12", Northampton County, Hydrologic Unit 02040106, on right bank 140 ft (43 m) upstream from highway bridge in Hugh Moore Parkway at Glendon, 1.9 mi (3.1 km) upstream from mouth, and 2.0 mi (3.2 km) southwest of Easton.

DRAINAGE AREA.--1,359 mi^2 (3,520 km^2).

PERIOD OF RECORD.--October 1966 to current year.

REVISED RECORDS.--WDR PA-72: 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 164.30 ft (50.079 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Francis E. Walter, Penn Forest, and Wild Creek Reservoirs and since February 1971, Beltzville Lake about 60 mi (97 km) upstream (see p. 97).

AVERAGE DISCHARGE.--12 years, 3,031 ft^3/s (85.84 m^3/s), 30.28 in/yr (769 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,600 ft^3/s (1,720 m^3/s) June 23, 1972, gage height, 24.86 ft (7.577 m), from rating curve extended above 36,000 ft^3/s (1,020 m^3/s); minimum, 526 ft^3/s (14.9 m^3/s) Oct. 1, 1966, gage height, 6.59 ft (2.009 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,700 ft^3/s (898 m^3/s) Jan. 26, gage height, 18.47 ft (5.630 m); minimum, 799 ft^3/s (22.6 m^3/s) July 24, Sept. 8, gage height, 6.91 ft (2.106 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2820	2720	8220	4070	6280	1630	9460	2000	3120	1230	1140	1520
2	3650	2610	9360	3850	5000	1600	7080	1950	2780	1140	1110	1180
3	2640	2590	7660	3540	4530	1650	6520	1910	2910	1550	961	1020
4	2170	2630	6450	3210	3880	1590	7690	1810	3030	2440	1060	970
5	1890	2720	5450	3200	3310	1490	7780	1890	2810	1860	1090	934
6	1780	2620	5830	3150	3370	1520	7060	2070	2630	1460	1230	880
7	1720	4080	5000	3090	3340	1510	5920	2110	2350	1310	1890	853
8	2440	10800	4290	3280	3280	1560	5180	2210	2710	1250	4030	934
9	4380	9380	4080	17200	2910	1520	4960	2850	3190	1210	2660	1070
10	6210	8460	3740	12200	2710	1510	4550	2600	3300	1180	2050	1020
11	4770	9360	3450	9580	2640	1520	3860	2310	2870	1150	2570	898
12	4200	8170	3250	9940	2640	1670	3690	2240	2570	1070	3460	862
13	3780	7220	3150	11200	2530	2110	3510	2180	2590	1040	3270	844
14	3160	6430	3690	7290	2500	4280	3210	6540	2630	1030	2420	817
15	5070	5820	6680	6010	2370	10600	2850	12300	2380	1170	1970	925
16	5130	4820	7410	5680	2210	7960	2670	9580	2210	1180	1740	1010
17	11600	4440	6410	5040	2220	5160	2600	12100	1870	1140	1600	980
18	9820	4520	6870	5080	2160	4230	2530	11900	1830	1120	1480	925
19	10500	3880	8150	4610	2120	4050	2620	11900	1860	1020	1400	2440
20	9770	3580	6740	4290	1970	5350	3360	10500	1770	970	1410	2560
21	9790	3400	9920	3550	1990	5410	3180	9270	1830	943	1270	2010
22	8780	3110	13100	3230	1860	7080	3060	8130	2050	907	1210	1790
23	7780	3170	9390	3020	1850	7650	2850	7080	1790	862	1150	1680
24	5350	3040	7650	2930	1830	8020	2730	5940	1520	835	1000	1540
25	4800	2910	7920	3600	1850	7250	2430	6800	1430	835	934	1220
26	4530	4670	7740	19600	1790	7650	2290	5770	1380	844	934	1140
27	4390	4460	6970	14300	1740	17900	2290	5000	1520	844	980	1100
28	3950	4070	5990	10000	1630	16100	2260	4460	1460	952	1470	1090
29	3360	3700	5330	8510	---	11600	2130	4100	1450	907	1510	1040
30	3130	3750	4790	7560	---	12800	2040	3670	1390	853	1270	1000
31	2980	---	4310	6910	---	12000	---	3390	---	1130	1380	---
TOTAL	156340	143130	198990	208720	76510	175970	122360	166560	67230	35432	51649	36252
MEAN	5043	4771	6419	6733	2733	5676	4079	5373	2241	1143	1666	1208
MAX	11600	10800	13100	19600	6280	17900	9460	12300	3300	2440	4030	2560
MIN	1720	2590	3150	2930	1630	1490	2040	1810	1380	835	934	817
CFSM	3.71	3.51	4.72	4.95	2.01	4.18	3.00	3.95	1.65	.84	1.23	.89
IN.	4.28	3.92	5.45	5.71	2.09	4.82	3.35	4.56	1.84	.97	1.41	.99

CAL YR 1977 TOTAL 1256148 MEAN 3442 MAX 18400 MIN 710 CFSM 2.53 IN 34.38
WTR YR 1978 TOTAL 1439143 MEAN 3943 MAX 19600 MIN 817 CFSM 2.90 IN 39.39

01454720 LEHIGH RIVER AT EASTON, PA

LOCATION.--Lat 40°41'12", long 75°12'32", Northampton County, Hydrologic Unit 02040106, at Third Street Bridge, Easton, U.S. Highway 611.

DRAINAGE AREA.--1,360 mi² (3,530 km²).

PERIOD OF RECORD.--October 1961 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: October 1972 to September 1974, October 1975 to current year.
WATER TEMPERATURES: October 1961 to current year.
DISSOLVED OXYGEN: June 1966 to current year.

COOPERATION.--Once-monthly water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 581 micromhos Aug. 19, 1963; minimum, 70 micromhos Nov. 14, 1970.
pH: Maximum, 8.3 July 24, 1978; minimum, 6.0 Mar. 16, 1978.
WATER TEMPERATURES: Maximum, 30.5°C July 29, 1970; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L Jan. 11, 1978; minimum, 0.0 mg/L Aug. 4, 1966.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 466 micromhos Sept. 15, 16; minimum, 72 micromhos Jan. 13.
pH: Maximum, 8.3 July 24; minimum, 6.0 Mar. 16.
WATER TEMPERATURES: Maximum, 30.0°C July 23, 24; minimum, 0.5°C Dec. 12.
DISSOLVED OXYGEN: Maximum, 15.5 mg/L Jan. 11; minimum 4.0 mg/L July 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT												
18...	1015	9813	9813	130	--	7.5	11.4	--	40	0	9.6	9.6
NOV												
16...	1050	9813	9813	150	--	8.0	10.4	--	74	0	12	--
DEC												
08...	1010	9813	9813	200	--	2.5	13.2	--	78	0	19	--
FEB												
01...	1050	9813	9813	140	--	--	--	--	58	0	13	--
22...	1200	9813	9813	290	--	3.0	12.4	--	100	0	24	--
MAR												
16...	1115	9813	9813	170	7.7	3.0	13.1	--	48	0	14	--
APR												
05...	1010	9813	9813	160	7.6	7.0	11.6	--	46	0	12	--
MAY												
23...	1115	9813	9813	140	9.6	16.5	9.3	--	52	0	11	--
JUN												
21...	1030	9813	9813	300	7.6	22.0	6.9	--	94	0	24	--
JUL												
18...	0955	9813	9813	410	8.0	28.0	10.3	--	130	0	35	--
AUG												
23...	1205	9813	9813	380	8.0	17.0	6.8	8	100	0	30	--
SEP												
21...	1020	9813	9813	270	7.7	19.0	8.3	16	75	0	21	--

DATE	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT												
18...	4.0	4.0	22	14	9.0	56	--	1.9	.02	.22	.23	1600
NOV												
16...	12	--	28	28	11	142	8	1.6	.04	.37	.15	570
DEC												
08...	8.2	--	44	30	15	94	--	1.9	.04	.47	.15	350
FEB												
01...	6.6	--	32	24	15	108	--	1.6	.03	.35	.12	270
22...	12	--	70	40	22	156	--	2.2	.07	1.3	.30	190
MAR												
16...	3.3	--	34	20	19	150	--	2.2	.06	.52	.42	15500
APR												
05...	3.8	--	30	14	12	92	--	1.4	.03	.32	.16	580
MAY												
23...	6.6	--	24	20	12	38	--	1.1	.03	.35	.18	460
JUN												
21...	9.3	--	60	50	21	206	--	1.8	.14	1.1	--	260
JUL												
18...	11	--	94	40	26	274	--	3.0	.35	.90	.36	170
AUG												
23...	8.0	--	82	35	25	232	22	2.0	.16	.93	.35	220
SEP												
21...	--	--	50	30	18	174	12	2.0	.14	.62	.28	970

01454720 LEHIGH RIVER AT EASTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 16...	1050	.2	.02	<1	<10	--	<10	20	<50	130	40	130
FEB 22...	1200	<.4	--	2	.07	--	<10	20	<50	130	20	170
MAY 23...	1115	.7	.00	<2	.03	--	<10	10	<50	120	<10	120
AUG 23...	1205	2.2	.02	<10	.07	<3	<10	10	50	70	<10	50

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	182	170	176	181	177	180	177	133	158	113	107	110
2	188	170	177	193	182	189	136	126	131	121	109	113
3	190	175	180	202	191	198	131	126	128	116	110	113
4	216	190	209	213	196	207	131	126	128	130	113	121
5	244	215	232	217	205	213	175	129	140	144	131	138
6	257	242	249	207	190	200	185	146	167	159	146	154
7	263	250	257	217	180	189	171	163	166	163	140	161
8	261	222	253	181	128	152	170	162	165	167	158	163
9	219	134	165	147	129	138	196	173	184	168	80	123
10	133	114	124	150	132	140	208	176	189	106	80	93
11	136	126	130	138	124	132	183	174	178	110	90	100
12	143	135	137	126	122	124	196	179	184	96	84	88
13	144	136	140	123	118	120	267	197	216	86	72	78
14	151	141	144	124	115	118	297	230	259	152	80	121
15	160	143	153	130	122	125	239	173	208	133	117	123
16	142	129	132	151	130	136	182	158	168	117	107	111
17	133	105	123	159	148	152	169	158	162	122	113	117
18	113	103	108	160	140	155	184	162	169	196	124	163
19	114	93	103	156	140	151	209	172	190	190	141	158
20	106	88	97	155	140	152	208	201	204	142	123	132
21	106	88	95	158	143	152	212	186	205	173	124	139
22	96	91	93	175	159	168	184	172	176	163	155	158
23	95	90	92	219	170	176	181	172	176	167	157	162
24	123	92	104	184	168	180	183	176	179	173	168	171
25	129	119	123	177	169	173	188	178	163	254	173	201
26	132	123	127	175	151	166	174	137	152	280	105	181
27	140	129	133	153	140	148	134	95	112	139	110	126
28	152	140	144	154	148	150	96	93	95	145	120	130
29	152	151	---	174	154	161	101	97	98	130	123	126
30	---	---	---	182	172	179	105	100	102	134	127	130
31	---	---	---	---	---	---	114	105	110	140	135	137
MONTH	263	88	150	219	115	161	297	93	164	280	72	134

01454720 LEHIGH RIVER AT EASTON, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	147	139	142	330	306	318	141	76	114	254	248	251
2	174	150	160	335	313	323	143	135	139	273	254	265
3	180	172	176	326	318	323	145	136	138	279	268	273
4	192	177	182	338	311	324	145	117	130	286	277	281
5	202	182	191	352	331	342	123	118	120	298	280	289
6	198	188	193	336	317	326	126	120	122	290	269	282
7	200	189	193	349	312	330	147	126	135	268	250	260
8	203	196	200	356	326	340	153	146	149	249	225	236
9	218	197	206	350	317	335	156	144	150	243	219	231
10	226	215	221	349	287	312	157	145	148	220	212	217
11	240	226	231	315	286	302	180	158	171	243	216	235
12	239	223	233	332	296	317	184	178	181	248	236	242
13	236	223	229	325	296	309	188	183	185	251	236	244
14	260	233	242	305	246	285	194	189	192	238	138	206
15	274	240	259	241	143	164	205	194	201	135	94	105
16	267	251	259	168	147	156	213	205	209	125	109	115
17	277	258	269	204	164	184	212	207	209	120	99	106
18	282	265	276	232	194	205	223	211	220	128	106	110
19	285	260	274	221	203	212	230	221	226	111	101	104
20	269	257	262	215	178	193	230	212	221	103	97	100
21	283	258	270	205	190	197	216	205	208	102	98	100
22	286	265	276	204	193	201	210	200	206	111	100	104
23	302	278	287	144	135	138	202	193	198	120	109	112
24	304	280	292	143	127	133	204	196	200	169	120	139
25	317	289	301	132	124	128	231	206	220	171	138	147
26	312	295	302	141	130	133	251	232	246	146	139	142
27	307	288	296	145	125	135	262	248	257	154	134	144
28	318	289	303	133	120	125	269	236	253	182	153	159
29	---	---	---	135	130	133	257	248	253	168	158	162
30	---	---	---	133	107	115	256	247	251	184	166	172
31	---	---	---	116	99	108	---	---	---	195	185	193
MONTH	318	139	240	356	99	231	269	76	188	298	94	185

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	205	196	202	336	323	329	376	339	353	357	307	332
2	220	205	216	341	333	337	359	351	356	329	307	316
3	230	195	222	342	318	332	361	351	356	340	330	334
4	224	214	219	327	260	280	370	357	365	354	341	348
5	219	210	215	258	246	250	387	366	375	360	346	354
6	218	200	213	281	246	262	388	305	359	368	353	363
7	255	217	236	315	282	296	339	278	314	403	365	388
8	255	230	244	330	315	320	300	224	253	418	393	409
9	229	196	221	334	325	331	243	225	237	413	388	403
10	193	177	181	334	324	329	260	244	255	399	376	391
11	192	186	191	336	319	327	277	250	263	377	366	373
12	205	190	196	390	340	355	259	218	229	377	365	371
13	232	207	222	391	359	371	249	216	232	416	378	398
14	234	218	227	378	368	374	248	226	235	439	410	423
15	230	217	225	389	374	380	282	249	270	466	432	449
16	237	215	228	374	335	347	301	281	293	466	440	455
17	277	236	261	344	315	327	313	300	305	442	403	430
18	273	268	271	341	310	319	322	310	317	413	377	402
19	271	263	267	363	342	349	331	319	325	387	298	347
20	288	263	277	376	365	370	332	321	328	312	258	284
21	295	280	287	396	373	386	321	308	313	256	250	253
22	291	277	284	405	383	397	341	313	323	273	256	267
23	288	282	285	411	383	395	349	334	341	319	272	300
24	314	283	297	389	374	384	362	349	352	317	301	309
25	319	309	313	391	373	381	378	362	372	316	299	303
26	322	314	317	431	376	407	404	380	397	362	317	331
27	324	306	315	416	390	403	410	393	404	379	364	373
28	344	305	320	454	398	425	406	352	380	394	376	382
29	316	311	313	417	394	409	348	325	335	403	388	395
30	326	294	311	409	393	403	337	315	325	408	393	403
31	---	---	---	395	369	380	353	331	343	---	---	---
MONTH	344	177	253	454	246	353	410	216	320	466	250	363

01454720 LEHIGH RIVER AT EASTON, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.9	6.9	6.9	7.2	7.0	7.1	7.6	7.3	7.5	7.4	7.4	7.4
2	7.0	6.9	6.9	7.2	7.1	7.1	7.3	7.3	7.3	7.5	7.4	7.4
3	7.1	6.9	7.0	7.1	7.1	7.1	7.3	7.3	7.3	7.5	7.4	7.5
4	7.1	6.9	7.1	7.2	7.1	7.2	7.4	7.3	7.3	7.5	7.4	7.5
5	7.1	7.1	7.1	---	---	---	7.5	7.4	7.4	7.5	7.4	7.4
6	7.1	6.8	7.1	---	---	---	7.5	7.3	7.4	7.4	7.1	7.3
7	7.1	7.1	7.1	7.2	6.8	7.1	7.5	7.4	7.5	7.2	7.2	7.2
8	7.1	7.1	7.1	7.2	7.0	7.1	7.5	7.5	7.5	7.3	7.2	7.2
9	7.1	7.0	7.0	7.1	7.0	7.0	7.5	7.5	7.5	7.5	6.7	7.1
10	7.1	6.9	7.0	7.1	7.0	7.1	7.5	7.5	7.5	7.0	6.7	6.9
11	7.0	6.7	6.9	7.2	7.0	7.1	7.6	7.5	7.5	7.2	6.8	6.9
12	7.0	6.9	6.9	7.2	7.1	7.1	7.6	7.2	7.4	6.9	6.8	6.9
13	7.0	6.9	7.0	7.2	7.2	7.2	7.3	7.2	7.3	6.9	6.7	6.8
14	7.1	6.9	7.0	7.3	7.2	7.2	7.3	7.2	7.3	7.1	6.8	7.0
15	7.2	7.1	7.1	7.3	7.2	7.2	7.2	7.0	7.1	7.1	7.1	7.1
16	7.1	7.0	7.0	7.3	7.2	7.2	7.1	7.0	7.0	7.1	7.1	7.1
17	7.3	7.0	7.1	7.3	7.2	7.3	7.0	7.0	7.0	7.2	7.1	7.1
18	7.0	6.9	6.9	7.4	7.2	7.3	7.1	7.0	7.1	7.2	7.1	7.2
19	7.0	6.8	6.9	7.4	7.2	7.3	7.1	7.1	7.1	7.2	7.2	7.2
20	6.9	6.8	6.8	7.4	7.2	7.4	7.1	7.0	7.1	7.2	7.2	7.2
21	6.9	6.6	6.8	7.4	7.4	7.4	7.2	7.1	7.2	7.3	7.2	7.2
22	6.7	6.7	6.7	7.4	7.3	7.4	7.1	7.0	7.0	7.3	7.3	7.3
23	6.8	6.7	6.7	7.4	7.3	7.4	7.1	7.0	7.0	7.3	7.3	7.3
24	7.0	6.8	6.9	7.4	7.4	7.4	7.1	7.0	7.1	7.3	7.3	7.3
25	7.0	6.7	6.9	7.5	7.4	7.4	7.1	7.1	7.1	7.3	7.3	7.3
26	7.0	6.9	6.9	7.6	7.4	7.5	7.1	7.1	7.1	7.6	7.1	7.3
27	7.0	6.9	6.9	7.5	7.4	7.5	7.3	7.1	7.2	7.1	7.0	7.0
28	7.0	6.9	7.0	7.5	7.4	7.5	7.3	7.2	7.3	7.1	7.0	7.0
29	7.0	7.0	---	7.5	7.4	7.5	7.3	7.3	7.3	7.1	7.0	7.0
30	---	---	---	7.5	7.5	7.5	7.4	7.3	7.3	7.1	7.0	7.1
31	---	---	---	---	---	---	7.4	7.3	7.3	7.[illegible]	7.0	7.0
MONTH	7.3	6.6	7.0	7.6	6.8	7.3	7.6	7.0	7.3	7.6	6.7	7.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.1	7.1	7.1	7.4	7.3	7.4	7.1	6.7	6.9	7.7	7.4	7.5
2	7.1	7.1	7.1	7.4	7.4	7.4	7.1	7.0	7.1	7.6	7.4	7.5
3	---	---	---	7.5	7.4	7.4	7.1	7.1	7.1	7.6	7.3	7.5
4	---	---	---	7.4	7.2	7.3	7.1	6.9	7.0	7.5	7.3	7.4
5	---	---	---	7.3	7.1	7.2	7.0	6.9	6.9	7.4	7.2	7.3
6	---	---	---	7.3	7.1	7.2	7.0	6.9	7.0	7.3	7.2	7.2
7	---	---	---	7.5	7.0	7.2	7.1	7.0	7.0	7.3	7.2	7.2
8	---	---	---	7.2	7.0	7.0	7.2	7.0	7.1	7.4	7.2	7.3
9	---	---	---	7.0	6.7	6.8	7.2	7.1	7.2	7.2	7.1	7.1
10	---	---	---	7.4	7.0	7.2	7.2	7.1	7.2	7.2	7.1	7.2
11	---	---	---	7.4	7.2	7.3	7.2	7.1	7.2	7.3	7.2	7.2
12	---	---	---	7.4	7.3	7.4	7.2	7.1	7.2	7.3	7.2	7.2
13	---	---	---	7.4	6.9	7.2	7.2	7.2	7.2	7.3	7.1	7.2
14	---	---	---	7.4	6.8	7.2	7.3	7.2	7.2	7.2	7.0	7.1
15	---	---	---	7.4	6.2	6.9	7.3	7.3	7.3	7.0	6.7	6.8
16	7.2	7.2	7.2	7.1	6.0	6.6	7.4	7.1	7.3	6.9	6.8	6.8
17	7.2	7.2	7.2	7.2	7.0	7.1	7.4	7.3	7.3	6.8	6.8	6.8
18	7.2	6.7	6.9	---	---	---	7.3	7.3	7.3	6.8	6.7	6.8
19	7.3	6.5	6.9	---	---	---	7.3	7.2	7.3	6.9	6.7	6.8
20	7.4	6.8	7.2	---	---	---	7.3	7.2	7.2	6.8	6.7	6.7
21	7.3	6.7	7.0	---	---	---	7.3	7.2	7.2	6.9	6.8	6.8
22	6.9	6.5	6.6	---	---	---	7.3	7.2	7.3	6.9	6.8	6.8
23	7.4	6.5	7.2	7.0	7.0	7.0	7.3	7.3	7.3	6.9	6.7	6.8
24	7.4	7.3	7.4	7.0	7.0	7.0	7.3	7.3	7.3	7.0	6.8	6.9
25	7.4	7.3	7.4	7.1	7.0	7.0	7.4	7.3	7.3	7.0	6.9	7.0
26	7.4	6.9	7.2	7.2	7.0	7.1	7.4	7.3	7.3	7.0	6.8	6.9
27	7.4	6.9	7.3	7.3	7.0	7.1	7.4	7.3	7.4	7.0	6.9	6.9
28	7.4	7.4	7.4	7.0	6.8	6.9	7.5	7.3	7.4	7.0	6.8	6.9
29	---	---	---	7.0	6.9	6.9	7.5	7.3	7.4	7.0	6.9	7.0
30	---	---	---	7.0	6.8	6.9	7.5	7.3	7.4	7.1	7.0	7.0
31	---	---	---	6.9	6.8	6.8	---	---	---	7.0	7.0	7.0
MONTH	7.4	6.5	7.1	7.5	6.0	7.1	7.5	6.7	7.2	7.7	6.7	7.1

01454720 LEHIGH RIVER AT EASTON, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	6.9	7.0	7.2	7.0	7.1	7.1	7.0	7.0	7.0	7.0	7.0
2	7.1	7.1	7.1	7.3	7.0	7.2	7.0	6.9	7.0	7.1	7.0	7.0
3	7.1	7.0	7.0	7.2	7.1	7.1	7.0	6.9	6.9	7.1	7.0	7.0
4	7.1	7.0	7.1	7.1	7.0	7.0	7.0	6.9	7.0	7.2	7.0	7.0
5	7.2	7.1	7.2	7.0	6.9	6.9	7.0	7.0	7.0	7.2	7.0	7.1
6	7.2	7.0	7.1	6.9	6.8	6.8	7.0	7.0	7.0	7.2	7.0	7.1
7	7.1	6.9	7.0	7.2	6.8	7.0	7.0	6.9	7.0	7.2	7.0	7.1
8	7.1	7.0	7.0	7.2	7.1	7.1	7.0	6.9	7.0	7.2	7.1	7.1
9	7.1	7.0	7.0	7.3	7.1	7.2	7.0	6.8	6.9	7.2	7.1	7.1
10	7.1	6.9	7.0	7.3	7.1	7.2	6.9	6.8	6.8	7.2	7.1	7.1
11	7.1	7.0	7.0	7.3	7.1	7.2	6.9	6.8	6.9	7.2	7.0	7.1
12	7.1	7.0	7.1	7.4	7.0	7.1	6.9	6.8	6.9	7.2	7.1	7.1
13	7.1	6.8	7.0	7.4	7.1	7.2	6.9	6.9	6.9	7.2	7.1	7.1
14	7.1	7.0	7.1	7.2	7.1	7.1	6.9	6.9	6.9	7.2	7.0	7.1
15	7.2	7.1	7.1	7.1	7.0	7.1	6.9	6.9	6.9	7.2	7.0	7.1
16	7.2	7.1	7.1	7.1	7.0	7.0	6.9	6.8	6.9	7.2	7.1	7.1
17	7.1	7.0	7.0	7.0	6.9	7.0	7.0	6.8	6.9	7.2	7.1	7.1
18	7.2	7.1	7.1	7.0	6.9	6.9	7.0	7.0	7.0	7.2	7.0	7.1
19	7.2	7.1	7.2	7.0	6.9	6.9	7.0	7.0	7.0	7.1	7.0	7.0
20	7.2	7.1	7.1	7.1	6.9	7.0	7.1	7.0	7.0	7.0	6.9	7.0
21	7.2	7.1	7.1	7.4	6.9	7.2	7.1	7.0	7.1	6.9	6.8	6.8
22	7.1	7.0	7.0	7.6	7.1	7.3	7.1	7.0	7.1	7.0	6.9	7.0
23	7.1	7.0	7.1	7.9	7.1	7.5	7.1	7.0	7.0	7.0	6.9	6.9
24	7.1	7.0	7.0	8.3	7.2	7.6	7.2	6.9	7.1	7.0	6.9	7.0
25	7.0	6.9	7.0	7.7	7.2	7.4	7.1	7.0	7.1	7.1	7.0	7.0
26	7.0	6.9	7.0	7.4	7.2	7.3	7.1	7.0	7.0	7.1	7.0	7.0
27	7.1	6.9	7.0	7.3	7.1	7.2	7.1	7.0	7.1	7.1	7.0	7.0
28	7.1	7.0	7.0	7.3	7.1	7.2	7.1	7.0	7.0	7.2	7.0	7.1
29	7.2	7.0	7.1	7.2	7.0	7.1	7.0	6.9	6.9	7.2	7.1	7.1
30	7.1	7.0	7.1	7.2	7.0	7.1	7.0	6.9	6.9	7.3	7.1	7.1
31	---	---	---	7.2	7.0	7.1	7.0	6.9	7.0	---	---	---
MONTH	7.2	6.8	7.1	8.3	6.8	7.1	7.2	6.8	7.0	7.3	6.8	7.1

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	19.0	19.0	12.0	11.5	12.0	---	---	---	3.0	3.0	3.0
2	19.0	18.5	18.5	12.5	12.0	12.0	6.0	5.5	5.5	3.0	2.5	3.0
3	18.5	17.5	18.0	13.5	12.5	13.0	5.5	5.5	5.5	2.5	2.0	2.5
4	17.5	17.0	17.5	15.0	13.5	14.0	5.5	5.0	5.5	2.0	2.0	2.0
5	17.5	17.0	17.0	15.5	15.0	15.0	5.5	4.5	5.0	2.5	2.0	2.0
6	17.5	17.5	17.5	15.0	14.5	15.0	4.5	4.5	4.5	3.0	2.5	3.0
7	17.5	17.0	17.0	14.5	13.5	14.0	4.5	4.0	4.5	3.5	3.0	3.5
8	17.0	16.0	16.5	13.5	12.5	13.0	4.0	3.5	3.5	4.0	3.5	3.5
9	16.0	15.5	15.5	13.0	12.5	13.0	4.0	3.5	3.5	4.5	2.5	4.0
10	16.0	15.5	16.0	13.5	13.0	13.5	3.5	3.0	3.0	2.5	1.5	1.5
11	---	---	---	13.5	11.5	12.5	---	---	---	1.5	1.0	1.5
12	---	---	---	11.5	10.0	10.5	1.0	.5	.5	2.0	1.5	2.0
13	---	---	---	10.0	9.0	9.5	2.0	1.0	1.5	2.0	2.0	2.0
14	12.5	12.0	12.0	9.0	8.5	9.0	3.0	2.5	3.0	2.5	2.0	2.0
15	12.0	11.5	12.0	9.5	8.5	9.0	3.5	3.5	3.5	2.0	2.0	2.0
16	12.5	12.0	12.0	10.5	9.5	10.0	4.0	4.0	4.0	2.0	1.5	2.0
17	12.5	11.0	11.5	11.5	10.0	11.0	4.5	4.5	4.5	2.0	2.0	2.0
18	11.0	10.0	10.5	11.0	10.5	11.0	5.0	4.5	4.5	2.0	2.0	2.0
19	11.0	11.0	11.0	10.5	9.0	10.0	5.0	4.5	4.5	2.0	2.0	2.0
20	11.5	11.0	11.0	9.5	9.0	9.5	5.0	5.0	5.0	2.0	1.5	1.5
21	11.5	11.0	11.5	9.5	9.0	9.5	5.5	5.0	5.0	2.0	1.5	1.5
22	12.0	11.5	11.5	10.0	9.5	9.5	5.0	5.0	5.0	2.0	2.0	2.0
23	12.0	11.5	11.5	10.0	9.5	9.5	---	---	---	2.0	2.0	2.0
24	11.5	11.0	11.5	10.0	9.5	10.0	---	---	---	2.0	2.0	2.0
25	12.0	11.0	11.5	10.0	9.5	9.5	---	---	---	2.5	2.0	2.5
26	12.5	12.0	12.0	9.5	8.0	9.0	---	---	---	3.0	2.0	2.5
27	13.5	12.5	13.0	8.0	7.5	7.5	2.0	2.0	2.0	2.0	1.5	2.0
28	14.5	13.5	14.0	7.5	7.0	7.0	2.0	2.0	2.0	2.0	1.5	2.0
29	14.5	14.0	---	7.5	7.0	7.0	2.0	2.0	2.0	2.0	1.5	2.0
30	---	---	---	---	---	---	2.5	2.0	2.5	2.0	1.5	2.0
31	---	---	---	---	---	---	3.0	2.5	3.0	2.0	2.0	2.0
MONTH	19.0	10.0	14.0	15.5	7.0	11.0	6.0	.5	3.5	4.5	1.0	2.0

01454720 LEHIGH RIVER AT EASTON, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.5	2.0	3.5	3.5	3.5	9.5	7.5	8.5	16.0	15.0	15.5
2	2.0	2.0	2.0	3.5	3.0	3.5	10.0	9.0	10.0	16.0	14.5	15.0
3	2.5	2.0	2.0	---	---	---	9.0	6.5	8.0	16.5	15.0	15.5
4	2.0	2.0	2.0	---	---	---	7.0	6.0	6.5	16.0	15.0	15.5
5	2.0	1.5	1.5	---	---	---	9.0	7.0	8.0	15.0	13.5	14.0
6	1.5	1.5	1.5	---	---	---	9.0	8.0	8.5	13.5	12.0	12.5
7	1.5	1.5	1.5	---	---	---	10.0	8.0	9.0	13.5	12.0	13.0
8	2.5	1.5	2.0	---	---	---	11.0	9.5	10.5	14.0	13.5	13.5
9	2.5	2.0	2.0	---	---	---	10.5	9.5	10.0	14.5	13.5	14.0
10	2.5	2.0	2.0	6.5	6.0	6.5	11.0	9.0	10.0	15.0	14.5	14.5
11	2.5	2.0	2.5	7.5	6.0	7.0	12.0	10.5	11.0	17.0	15.0	15.5
12	2.5	2.0	2.5	8.5	7.0	8.0	13.0	11.5	12.5	17.5	16.5	17.0
13	2.5	2.5	2.5	9.0	8.0	8.5	14.0	13.0	13.5	17.5	17.0	17.0
14	2.5	2.5	2.5	8.5	6.0	7.5	14.0	13.0	13.5	17.0	14.5	16.0
15	3.0	2.5	2.5	6.0	3.5	4.5	13.0	12.0	12.5	14.5	13.0	13.5
16	3.0	2.5	2.5	5.0	4.5	4.5	12.0	11.0	11.5	13.0	12.5	12.5
17	3.0	2.5	3.0	5.5	4.5	5.0	11.5	11.0	11.0	13.0	12.5	12.5
18	3.0	3.0	3.0	6.0	5.0	5.5	12.5	11.0	12.0	13.5	12.5	13.0
19	3.0	2.5	3.0	7.0	5.5	6.0	12.5	11.5	12.0	15.0	13.5	14.0
20	3.0	2.5	3.0	7.5	6.0	7.0	12.0	11.5	11.5	16.0	15.0	15.5
21	3.0	2.5	2.5	8.5	7.0	8.0	11.5	11.0	11.5	17.5	16.0	16.5
22	3.0	2.5	2.5	9.0	8.0	8.5	12.5	11.0	11.5	17.0	16.0	16.5
23	3.0	2.5	2.5	9.0	8.0	8.5	13.5	11.5	12.5	17.5	16.5	17.0
24	3.0	2.5	3.0	9.5	8.0	9.0	13.5	13.0	13.0	16.5	15.5	16.0
25	3.5	3.0	3.0	8.0	5.5	7.0	14.0	12.5	13.0	16.5	15.0	15.5
26	3.5	3.5	3.5	5.5	5.0	5.0	14.5	14.0	14.0	19.0	16.5	18.0
27	3.5	3.5	3.5	7.0	5.0	5.5	14.0	13.5	14.0	19.5	18.5	19.0
28	3.5	3.0	3.5	8.5	7.0	7.5	14.5	13.0	14.0	20.0	18.5	19.0
29	---	---	---	9.0	8.5	9.0	16.0	14.5	15.0	21.0	19.5	20.0
30	---	---	---	8.5	7.0	7.5	17.0	15.5	16.0	22.0	20.0	21.0
31	---	---	---	7.5	7.0	7.0	---	---	---	23.0	21.5	22.0
MONTH	3.5	1.5	2.5	9.5	3.0	6.5	17.0	6.0	11.5	23.0	12.0	16.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	22.0	22.5	26.0	24.5	25.5	24.0	22.5	23.0	24.0	23.0	23.5
2	23.5	22.5	23.0	25.0	23.5	24.5	24.5	22.5	23.5	24.5	23.0	23.5
3	23.5	21.0	22.5	23.5	21.0	22.5	26.0	23.5	24.5	25.0	23.0	24.0
4	21.5	20.5	21.0	21.0	19.0	19.5	26.0	25.0	25.5	24.5	23.0	24.0
5	20.5	19.5	20.0	20.0	18.5	19.5	26.0	24.5	25.0	24.5	23.0	24.0
6	21.0	20.0	20.5	22.5	20.0	21.5	25.0	24.0	24.5	25.5	23.0	24.0
7	21.0	20.0	20.5	24.5	22.0	23.5	25.5	24.5	25.0	25.5	24.0	25.0
8	20.5	20.0	20.5	26.5	23.5	25.0	25.5	24.0	25.0	25.0	22.5	23.5
9	21.5	20.0	21.0	27.5	25.0	26.5	25.0	24.5	24.5	22.5	21.0	22.0
10	22.0	20.5	21.0	27.5	26.0	26.5	25.5	24.5	25.0	21.5	20.5	21.0
11	22.5	21.0	21.5	27.0	25.5	26.0	25.0	23.5	24.5	21.5	20.5	21.0
12	23.0	22.0	22.5	26.5	24.5	25.5	23.5	23.0	23.5	22.5	21.0	22.0
13	23.5	21.0	22.5	26.5	24.0	25.0	24.0	23.0	23.5	22.5	21.5	22.0
14	21.0	20.0	20.5	25.5	24.5	25.0	25.0	24.0	24.5	22.5	21.0	21.5
15	20.0	19.0	19.5	25.5	23.5	24.5	25.5	24.5	25.0	21.5	20.5	21.0
16	21.0	19.5	20.0	25.5	24.0	24.5	26.5	25.5	26.0	20.5	20.0	20.5
17	20.5	19.5	20.0	25.0	24.0	24.5	27.5	26.0	26.5	22.0	20.0	21.0
18	21.0	19.0	20.0	25.5	23.5	24.5	27.0	26.5	26.5	22.0	21.0	21.5
19	23.5	21.0	22.5	27.0	24.0	25.5	27.0	26.0	26.5	22.0	20.5	21.5
20	25.0	23.0	24.0	28.0	25.5	26.5	27.0	26.0	26.5	21.5	20.0	20.5
21	25.0	24.5	24.5	28.5	26.5	27.5	26.5	25.5	26.0	22.0	20.5	21.0
22	25.0	24.0	24.5	29.5	27.5	28.5	26.5	25.0	25.5	22.0	21.5	22.0
23	24.5	23.5	24.0	30.0	28.0	29.0	27.0	24.5	25.5	21.5	20.5	21.0
24	24.5	23.5	24.0	30.0	28.5	29.5	27.0	24.5	25.5	21.0	20.0	20.5
25	24.5	24.0	24.0	29.5	28.0	28.5	26.5	25.0	25.0	20.5	19.5	20.0
26	24.5	23.0	24.0	28.0	26.5	27.0	25.0	24.0	24.5	20.5	19.5	20.0
27	24.5	23.0	23.5	27.0	25.5	26.5	25.5	23.5	24.5	20.0	18.5	19.0
28	26.5	24.5	25.5	27.5	25.5	26.5	24.5	24.0	24.0	20.0	18.0	19.0
29	26.5	25.5	26.0	27.0	25.5	26.0	25.5	23.5	24.5	19.5	18.0	18.5
30	26.5	25.5	26.0	26.5	25.5	26.0	26.0	24.5	25.0	19.0	17.5	18.0
31	---	---	---	25.5	24.0	24.5	25.0	24.0	24.5	---	---	---
MONTH	26.5	19.0	22.5	30.0	18.5	25.5	27.5	22.5	25.0	25.5	17.5	21.5

01454720 LEHIGH RIVER AT EASTON, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.8	8.5	8.6	10.8	10.5	10.6	12.4	12.0	12.2	14.1	14.0	14.1
2	8.8	8.5	8.7	10.5	10.0	10.2	12.3	11.5	12.0	14.2	14.0	14.1
3	8.8	8.6	8.7	10.0	9.5	9.7	12.1	12.0	12.1	14.5	14.2	14.3
4	9.0	8.7	8.8	9.6	9.1	9.3	12.1	12.0	12.1	14.8	14.5	14.6
5	9.0	8.6	8.9	9.1	8.8	8.9	12.1	12.0	12.1	14.7	14.4	14.5
6	8.8	8.6	8.7	9.1	8.8	8.9	12.8	12.2	12.5	14.4	13.8	14.1
7	8.8	8.4	8.6	9.8	9.0	9.3	13.3	12.8	13.0	14.1	13.4	13.8
8	9.6	8.4	8.8	10.6	9.8	10.3	14.0	13.5	13.8	14.0	13.6	13.8
9	9.9	9.6	9.8	10.8	9.7	10.4	14.1	13.7	13.9	13.8	12.9	13.4
10	10.2	9.8	10.0	10.4	9.5	10.1	14.6	14.0	14.3	15.0	13.9	14.6
11	10.3	10.1	10.2	11.1	10.0	10.6	14.9	14.6	14.8	15.5	14.4	15.1
12	10.2	10.0	10.1	11.7	11.2	11.5	14.8	14.4	14.7	15.3	15.0	15.2
13	10.2	9.9	10.1	12.0	11.7	11.8	14.5	14.1	14.3	15.0	13.8	14.5
14	10.3	10.1	10.2	12.2	12.0	12.1	14.0	13.4	13.7	14.3	13.4	13.8
15	10.6	10.2	10.4	12.1	11.7	12.0	13.7	13.4	13.6	14.1	13.8	14.0
16	10.6	10.3	10.5	11.7	11.1	11.3	13.8	13.5	13.6	14.6	14.3	14.5
17	10.9	9.9	10.3	11.1	10.4	10.8	13.7	13.6	13.6	14.8	14.4	14.6
18	11.6	11.3	11.5	11.3	10.4	10.9	13.6	13.3	13.5	14.7	14.4	14.5
19	11.4	11.2	11.3	11.8	11.2	11.5	13.7	13.5	13.6	14.6	14.4	14.6
20	11.4	11.0	11.2	12.0	11.6	11.8	13.5	13.2	13.4	14.5	14.4	14.5
21	11.4	11.1	11.2	11.9	11.7	11.8	13.3	12.8	13.0	14.5	14.4	14.5
22	11.3	11.2	11.2	11.7	11.4	11.5	13.5	12.7	13.1	14.5	14.4	14.4
23	11.3	11.2	11.2	11.5	11.4	11.4	---	---	---	14.5	14.4	14.4
24	11.2	10.8	11.1	11.5	11.2	11.4	---	---	---	14.4	14.3	14.4
25	11.1	10.8	10.9	11.4	11.2	11.3	---	---	---	14.3	12.7	13.5
26	10.8	10.4	10.6	12.0	9.9	11.5	---	---	---	12.7	11.3	12.0
27	10.4	10.0	10.2	12.8	12.0	12.4	15.1	15.0	15.1	11.3	10.0	10.8
28	10.0	9.4	9.6	12.8	12.7	12.8	15.0	14.9	15.0	11.7	10.7	11.2
29	9.5	9.5	---	12.9	12.8	12.8	15.0	14.9	14.9	11.6	11.1	11.3
30	---	---	---	12.8	12.4	12.6	14.9	14.5	14.7	11.3	10.7	11.0
31	---	---	---	---	---	---	14.5	14.1	14.3	10.9	10.5	10.8
MONTH	11.6	8.4	10.1	12.9	8.8	11.1	15.1	11.5	13.6	15.5	10.0	13.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	12.0	11.5	11.8	12.6	11.8	12.3	10.5	9.2	9.7
2	13.4	13.4	13.4	12.3	11.5	11.9	12.0	11.5	11.7	10.6	9.1	9.8
3	13.4	13.3	13.4	12.0	11.8	11.9	12.6	12.0	12.3	11.0	9.1	9.9
4	13.5	13.3	13.4	12.4	11.7	12.0	13.3	12.6	12.9	10.5	9.2	9.7
5	13.5	13.4	13.4	12.6	11.8	12.2	12.9	12.4	12.6	9.6	9.2	9.3
6	13.4	13.2	13.3	12.7	12.1	12.3	12.7	12.3	12.5	10.2	9.3	9.9
7	13.2	13.0	13.1	12.5	11.9	12.2	12.5	12.0	12.2	11.0	10.0	10.5
8	13.2	12.9	13.1	12.1	11.7	11.9	11.9	11.7	11.7	10.4	10.0	10.2
9	13.2	13.1	13.1	12.2	11.6	11.9	12.0	11.7	11.8	10.1	9.6	9.9
10	13.0	12.9	12.9	11.7	11.1	11.5	12.0	11.7	11.9	10.3	9.8	10.1
11	12.9	12.7	12.8	11.7	10.9	11.3	11.6	11.0	11.2	10.7	9.9	10.3
12	12.8	12.7	12.8	11.2	10.5	10.9	11.0	10.7	10.8	10.4	9.8	10.1
13	12.8	12.6	12.7	11.4	10.5	11.0	10.8	10.2	10.5	10.1	9.5	9.7
14	12.6	12.5	12.5	11.2	10.6	11.0	10.8	10.1	10.5	10.9	9.7	10.0
15	12.6	12.5	12.6	12.7	11.3	12.4	11.1	10.7	10.9	11.6	11.2	11.4
16	12.7	12.5	12.7	12.5	12.2	12.4	11.4	10.9	11.1	11.5	10.9	11.3
17	12.7	12.2	12.4	12.6	12.4	12.5	11.5	11.0	11.2	11.3	11.0	11.1
18	12.4	12.1	12.2	12.4	12.2	12.3	11.3	10.7	11.0	11.3	10.9	11.1
19	12.4	12.1	12.3	12.4	12.2	12.3	10.8	10.3	10.6	10.9	10.5	10.8
20	12.6	12.3	12.4	12.2	12.0	12.1	10.8	10.5	10.7	10.5	10.2	10.3
21	12.6	12.3	12.5	12.0	11.6	11.8	11.1	10.7	10.9	10.3	9.9	10.1
22	12.5	12.2	12.4	11.6	11.4	11.5	11.5	11.0	11.2	10.2	10.0	10.1
23	12.5	12.2	12.4	11.9	11.7	11.6	11.5	10.9	11.2	10.0	9.3	9.6
24	12.3	12.0	12.2	12.1	11.7	11.9	11.2	10.5	10.8	9.3	8.8	9.0
25	12.2	11.8	12.1	12.9	12.2	12.5	11.1	10.2	10.8	9.4	8.7	9.2
26	12.0	11.7	11.9	13.1	12.9	13.1	10.5	9.8	10.1	9.1	8.6	8.8
27	12.3	11.7	12.0	13.3	12.7	13.1	10.3	9.6	9.9	8.6	8.2	8.3
28	12.2	11.7	12.0	12.8	12.2	12.4	10.6	9.8	10.1	8.3	7.0	8.0
29	---	---	---	12.4	12.0	12.2	10.5	9.4	9.9	8.2	7.7	8.0
30	---	---	---	13.2	12.2	12.8	10.3	9.1	9.6	8.0	7.8	7.9
31	---	---	---	13.0	12.7	12.9	---	---	---	7.8	7.3	7.6
MONTH	13.5	11.7	12.7	13.3	10.5	12.1	13.3	9.1	11.2	11.6	7.0	9.7

01454720 LEHIGH RIVER AT EASTON, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.2	7.5	6.9	5.3	6.0	6.1	5.2	5.6	6.6	5.4	5.9
2	7.8	7.2	7.5	7.2	5.5	6.3	6.6	5.2	5.8	6.9	6.1	6.4
3	7.4	6.8	7.0	6.9	5.8	6.3	6.2	4.9	5.5	6.6	5.8	6.1
4	7.9	7.0	7.5	7.5	6.7	7.1	5.5	4.5	5.0	6.7	5.4	5.9
5	8.3	7.8	8.0	8.0	7.4	7.7	5.3	4.5	4.9	6.4	5.2	5.8
6	8.1	7.3	7.6	7.4	6.4	7.0	6.1	4.8	5.3	6.6	5.1	5.9
7	7.5	6.4	7.1	7.3	6.0	6.5	5.8	5.4	5.6	6.9	4.9	5.9
8	7.8	7.0	7.4	7.2	5.9	6.4	7.0	5.7	6.4	6.4	5.1	5.6
9	7.8	7.4	7.6	7.2	5.5	6.3	6.9	6.0	6.3	6.9	5.7	6.1
10	7.8	7.5	7.6	7.1	5.3	6.1	6.1	5.6	5.9	7.5	6.0	6.7
11	7.9	7.5	7.7	7.3	5.4	6.2	6.6	5.7	6.1	7.4	6.2	6.8
12	7.8	7.2	7.6	7.7	5.1	6.1	7.3	6.6	7.0	7.2	6.2	6.7
13	7.3	6.7	6.9	8.0	5.0	6.4	7.2	6.9	7.0	7.1	5.7	6.3
14	8.0	7.1	7.6	6.4	5.2	5.8	7.2	6.7	6.9	7.1	5.7	6.3
15	8.2	7.9	8.0	6.7	5.2	5.8	6.7	6.1	6.4	7.0	5.9	6.3
16	8.1	7.3	7.7	6.2	5.1	5.6	6.2	5.7	6.0	7.1	6.2	6.6
17	7.4	6.1	6.8	6.1	5.1	5.7	6.2	5.6	5.8	7.5	6.4	6.8
18	7.9	6.9	7.5	6.9	5.3	6.0	6.4	5.6	6.0	7.4	6.1	6.7
19	7.6	6.8	7.3	6.9	5.1	5.9	6.7	5.7	6.2	7.2	6.4	6.8
20	7.2	6.3	6.9	6.9	4.7	5.7	6.8	5.8	6.3	7.8	7.2	7.6
21	6.6	6.0	6.4	7.6	4.4	5.9	7.4	6.3	6.7	7.8	7.4	7.6
22	6.3	5.8	6.1	8.1	4.4	6.0	7.4	6.4	6.9	7.5	7.0	7.3
23	6.7	6.2	6.5	9.6	4.4	6.7	7.5	6.3	6.8	7.0	6.8	6.9
24	6.7	6.1	6.4	10.9	4.4	7.0	7.2	6.2	6.7	7.8	6.8	7.3
25	6.8	6.1	6.4	7.9	4.2	5.9	6.0	5.2	5.6	8.1	7.3	7.6
26	6.5	6.0	6.3	7.2	4.2	5.6	6.5	5.1	5.7	8.0	7.3	7.6
27	6.7	5.3	6.1	7.0	4.3	5.5	6.6	5.3	5.9	8.0	7.1	7.5
28	5.8	5.1	5.4	6.7	4.1	5.2	6.1	5.6	5.9	8.1	7.1	7.4
29	6.6	5.4	5.9	6.5	4.0	5.2	6.3	5.7	6.0	8.3	6.6	7.4
30	6.0	5.5	5.8	7.0	4.4	5.5	6.1	5.5	5.7	8.4	6.9	7.5
31	---	---	---	6.0	4.6	5.4	5.6	4.9	5.4	---	---	---
MONTH	8.3	5.1	7.0	10.9	4.0	6.1	7.5	4.5	6.0	8.4	4.9	6.7

LAKE AND RESERVOIRS IN LEHIGH RIVER BASIN

01447780 FRANCIS E. WALTER RESERVOIR (formerly published as Bear Creek Reservoir).--Lat 41°06'45", long 75°43'15", Luzerne County, Hydrologic Unit 02040106, at dam on Lehigh River, 2,200 ft (670 m) downstream from Bear Creek and 5 mi (8 km) northwest of White Haven. DRAINAGE AREA, 289 mi^2 (749 km^2). PERIOD OF RECORD, February 1961 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earthfill embankment covered with a rock shell, with concrete spillway at elevation 1,450.0 ft (441.96 m). Storage began Feb. 17, 1961; water in reservoir first reached conservation pool elevation in June 1961. Total capacity at elevation 1,450 ft (441.96 m) is 110,700 acre-ft (136 hm^3) of which 108,700 acre-ft (134 hm^3) is controlled storage above elevation 1,300.00 ft (396.24 m) (conservation pool). Dead storage is 2,000 acre-ft (2.47 hm^3). Reservoir is used for flood control and recreation. Records furnished by the Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 42,600 acre-ft (52.5 hm^3) June 26, 1972 (elevation, 1,398.20 ft or 426.171 m); minimum (after establishment of conservation pool), 1,390 acre-ft (1.71 hm^3) Dec. 4, 1977 (elevation, 1,293.70 ft or 394.320 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 22,470 acre-ft (27.7 hm^3) Mar. 29 (elevation, 1,371.75 ft or 418.109 m); minimum, 1,390 acre-ft (1.71 hm^3) Dec. 4 (elevation, 1,293.70 ft or 394.320 m).

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, Hydrologic Unit 02040106, at dam on Wild Creek, 0.7 mi (1.1 km) upstream from Hatchery, 2.6 mi (4.2 km) upstream from Wild Creek Dam, 4.4 mi (7.1 km) upstream from mouth, and 10 mi (16 km) northeast of Palmerton. DRAINAGE AREA, 16.5 mi^2 (42.7 km^2). PERIOD OF RECORD, October 1958 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

Reservoir formed by an earthfill dam, with ungated concrete spillway at elevation, 1,000.00 ft (304.800 m). Storage began in October 1958. Capacity at elevation 1,000.00 ft (304.800 m) is 19,980 acre-ft (24.6 hm^3). Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is done by valves on pipe through dam. Records furnished by city of Bethlehem. Figures given herein include diversion, since October 1969, from Tunkhannock Creek basin into Wild Creek basin.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 20,520 acre-ft (25.3 hm^3) Mar. 28, 1977 (elevation, 1,000.92 ft or 305.080 m); minimum, 176 acre-ft (0.217 hm^3) Oct. 6, 1965 (elevation, 902.40 ft or 275.052 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 20,520 acre-ft (25.3 hm^3) Mar. 28 (elevation, 1,000.92 ft or 305.080 m); minimum, 14,890 acre-ft (18.4 hm^3) Oct. 1 (elevation, 988.05 ft or 301.158 m).

01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, Hydrologic Unit 02040106, at dam on Wild Creek, 1.6 mi (2.6 km) upstream from mouth, 2.4 mi (3.9 km) south of Hatchery, and 7.5 mi (12 km) northeast of Palmerton. DRAINAGE AREA, 22.2 mi^2 (57.5 km^2). PERIOD OF RECORD, January 1941 to current year. NONRECORDING GAGE. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Bethlehem).

Reservoir formed by earthfill dam, with concrete ungated spillway at elevation 820.00 ft (249.936 m). Storage began January 27, 1941; water in reservoir first reached minimum pool elevation in February 1941. Total capacity at elevation 820.00 ft (249.936 m) is 12,500 acre-ft (15.4 hm^3) of which 12,000 acre-ft (15 hm^3) is controlled storage. Reservoir is used for municipal water supply. Figures given herein represent usable contents. Regulation is accomplished by valves on pipe through dam. Records furnished by city of Bethlehem. Since October 1969 the basin upstream has received diversion from Tunkhannock Creek basin.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 12,880 acre-ft (15.9 hm^3) May 23, 1942 (elevation, 822.93 ft or 250.829 m); minimum (after first filling), 2,680 acre-ft (3.30 hm^3) Nov. 15, 1966 (elevation, 774.10 ft or 235.946 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 12,350 acre-ft (15.2 hm^3) Mar. 28 (elevation, 821.18 ft or 250.296 m); minimum, 11,540 acre-ft (14.2 hm^3) Sept. 30 (elevation, 818.02 ft or 249.332 m).

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.45 mi (0.72 km) upstream from gaging station on Pohopoco Creek, 0.55 mi (0.88 km) upstream from Sawmill Run and 2.3 mi (3.7 km) northeast of Parryville. DRAINAGE AREA, 96.3 mi^2 (249.4 km^2). PERIOD OF RECORD, February 1971 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

Reservoir formed by an earth and rockfill dam with ungated, partially lined spillway at elevation 651.00 ft (198.425 m). Storage began Feb. 8, 1971. Capacity at elevation 651.00 ft (198.425 m) is 68,300 acre-ft (84.2 hm^3). Ordinary minimum (conservation) pool elevation 628.00 ft (191.414 m)(capacity, 41,250 acre-ft or 50.9 hm^3). Dead storage is 1,390 acre-ft (1.71 hm^3). Reservoir is used for recreation, flood control, low-flow augmentation and water supply. Figures given herein represent total contents. Regulation is accomplished by a multi-level water-quality outlet system and two flood-control gates. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 49,730 acre-ft (61.3 hm^3) Jan. 29, 1976 (elevation, 636.30 ft or 193.944 m); minimum, 136 acre-ft (0.168 hm^3) Feb. 8, 1971 (elevation, 516.20 ft or 157.338 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 48,630 acre-ft (60.0 hm^3) Mar. 31 (elevation, 635.30 ft or 193.639 m); minimum, 37,210 acre-ft (45.9 hm^3) Feb. 21-25 (elevation, 623.60 ft or 190.073 m).

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)
	01447780 Francis E. Walter Reservoir			01449400 Penn Forest Reservoir		
Sept. 30	1,311.66	3,300	--	988.16	14,930	--
Oct. 31	1,305.17	2,530	- 12.9	993.76	17,210	+ 37.1
Nov. 30	1,300.63	2,060	- 7.9	1,000.25	20,120	+ 46.9
Dec. 31	1,300.88	2,090	+ 0.5	1,000.33	20,170	+ 0.8
CAL YR 1977	--	--	- 0.2	--	--	+ 0.2
Jan. 31	1,314.65	3,700	+ 26.2	1,000.34	20,180	+ 0.2
Feb. 28	1,300.38	2,040	- 29.9	1,000.07	20,020	- 2.9
Mar. 31	1,343.10	9,660	+123.9	1,000.55	20,300	+ 4.6
Apr. 30	1,300.78	2,080	-127.4	1,000.06	20,010	- 4.9
May 31	1,299.19	1,910	- 2.8	1,000.20	20,090	+ 1.3
June 30	1,300.17	2,020	+ 1.8	1,000.16	20,040	- 0.8
July 31	1,299.13	1,900	- 2.0	997.73	18,960	- 17.6
Aug. 31	1,299.29	1,920	+ 0.3	996.49	18,400	- 9.1
Sept. 30	1,298.44	1,830	- 1.5	994.26	17,420	- 16.5
WTR YR 1978	--	--	- 2.0	--	--	+ 3.4
	01449700 Wild Creek Reservoir			01449790 Beltzville Lake		
Sept. 30	818.23	11,600	--	625.08	38,520	--
Oct. 31	818.21	11,590	- 0.2	627.29	40,580	+ 33.5
Nov. 30	820.28	12,080	+ 8.2	629.36	42,560	+ 33.3
Dec. 31	820.38	12,110	+ 0.5	627.30	40,580	- 32.2
CAL YR 1977	--	--	+ 0.2	--	--	- 1.9
Jan. 31	820.37	12,110	0	628.90	42,100	+ 24.7
Feb. 28	819.16	11,830	- 5.0	623.78	37,360	- 85.3
Mar. 31	820.69	12,210	+ 6.2	634.89	48,180	+176.0
Apr. 30	820.01	12,000	- 3.5	627.85	41,110	-118.8
May 31	820.31	12,090	+ 1.5	628.04	41,290	+ 2.9
June 30	819.78	11,960	- 2.2	627.87	41,130	- 2.7
July 31	819.39	11,880	- 1.3	627.66	40,930	- 3.3
Aug. 31	819.36	11,870	- 0.2	627.83	41,090	+ 2.6
Sept. 30	818.02	11,540	- 5.5	627.28	40,570	- 8.7
WTR YR 1978	--	--	- 0.1	--	--	+ 2.8

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA

LOCATION.--Lat 40°26'01", long 75°07'01", Bucks County, Hydrologic Unit 02040105, on right bank at highway bridge, 1.5 mi (2.4 km) northeast of Pipersville, and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--97.4 mi^2 (252.3 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1935 to current year.

REVISED RECORDS.--WDR PA-75-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 258.96 ft (78.931 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for winter periods, which are poor. Regulation at low flow by mills above station, and since December 1973 by Nockamixon Lake about 6.2 mi (10.0 km) upstream.

AVERAGE DISCHARGE.--43 years, 144 ft^3/s (4.078 m^3/s), 20.13 in/yr (511 mm/yr), adjusted for storage since December 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s (453 m^3/s) Aug. 18, 1955, gage height, 11.26 ft (3.432 m), from rating curve extended above 3,600 ft^3/s (102 m^3/s) on basis of slope-area measurement at gage height 10.48 ft (3.194 m); minimum, 0.05 ft^3/s (0.001 m^3/s) Sept. 29, 1941; minimum daily, 0.1 ft^3/s (0.003 m^3/s) Sept. 24, 29, Oct. 6, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,540 ft^3/s (185 m^3/s) Jan. 26, gage height, 7.97 ft (2.429 m); minimum daily, 6.4 ft^3/s (0.18 m^3/s) July 30; minimum discharge, 6.1 ft^3/s (0.17 m^3/s) July 30, gage height, 0.83 ft (0.253 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	28	1260	15	203	52	160	35	82	22	20	588
2	24	26	702	13	227	51	125	31	64	18	20	312
3	26	500	648	22	171	54	89	28	51	139	20	145
4	23	553	624	12	87	53	91	27	93	440	38	84
5	22	696	642	12	76	76	125	36	81	271	32	54
6	18	522	395	12	72	82	118	51	58	133	239	40
7	17	366	50	12	188	120	123	55	43	79	1310	34
8	17	606	51	30	157	120	113	51	54	54	540	33
9	25	456	36	1000	151	120	89	145	54	48	258	36
10	60	307	26	822	130	113	72	235	41	33	115	27
11	108	361	19	576	110	82	66	142	34	29	85	24
12	77	798	14	654	108	70	76	91	30	24	1020	22
13	84	738	19	516	98	192	69	72	32	20	1530	19
14	37	698	215	244	80	1060	69	1370	33	17	600	17
15	80	352	804	79	90	2190	58	1570	28	18	227	17
16	208	23	822	69	80	1660	43	822	24	19	115	17
17	500	43	648	33	70	750	37	1390	23	29	76	16
18	400	63	1090	276	78	468	35	1620	20	24	51	17
19	208	31	1080	405	70	582	40	816	20	20	37	128
20	308	25	834	325	66	846	380	415	19	17	31	148
21	190	23	1970	307	64	1000	395	249	20	16	26	95
22	115	25	1530	262	62	1320	227	142	45	14	21	67
23	65	85	558	312	60	936	128	97	32	13	19	45
24	56	64	312	361	58	750	91	1060	29	11	16	35
25	48	46	456	600	57	534	73	1640	25	9.6	15	31
26	43	380	546	4340	56	840	61	630	24	8.1	13	27
27	42	600	432	2820	54	3260	55	307	27	7.0	12	22
28	41	654	660	960	53	1640	54	181	27	7.4	20	20
29	37	630	642	498	---	624	42	120	27	7.4	28	18
30	33	708	438	415	---	339	40	93	28	6.4	100	16
31	30	---	20	405	---	215	---	84	---	19	564	---
TOTAL	2907	10399	17543	16407	2760	20199	3136	13605	1168	1564.9	7198	2154
MEAN	93.8	347	566	529	98.6	652	105	439	38.9	50.5	232	71.8
MAX	500	798	1970	4340	227	3260	395	1640	93	440	1530	588
MIN	17	23	14	12	53	51	35	27	19	6.4	12	16
(ƒ)	1.14	-34.1	-11.2	+47.6	-2.52	+4.55	-4.71	+2.28	-5.88	+1.14	+5.69	-7.06
MEAN≠	94.9	312	555	577	96.0	656	99.8	441	33.0	51.6	238	64.7
CFSM≠	.97	3.21	5.69	5.92	.99	6.74	1.02	4.53	.34	.53	2.44	.66
IN.≠	1.12	3.58	6.57	6.83	1.03	7.77	1.14	5.22	.38	.61	2.82	.74

CAL YR 1977 TOTAL 69075.1 MEAN 189 MAX 3970 MIN 4.2 MEAN≠ 185 CFSM≠ 1.90 IN.≠ 25.86
WTR YR 1978 TOTAL 99040.9 MEAN 271 MAX 4340 MIN 6.4 MEAN≠ 271 CFSM≠ 2.78 IN.≠ 37.81

ƒ Change in contents in Nockamixon Lake, equivalent in cubic ft per second.
≠ Adjusted for change in contents in Nockamixon Lake.

01459500 TOHICKON CREEK NEAR PIPERSVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, NOVEMBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)
NOV 21...	1130	9813	9813	22	250	--	--	--	--	90	--	18
FEB 27...	1030	9813	9813	54	150	--	--	--	--	60	--	10
MAY 17...	1230	9813	9813	1140	150	--	--	--	--	--	--	8.0
AUG 24...	1030	9813	9813	16	190	8.9	24.0	9.4	12	65	0	13

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
NOV 21...	12	46	38	20	186	4	190	2.4	.03	.10	1.2	130
FEB 27...	9.3	28	14	16	54	16	70	1.5	.09	.17	.14	250
MAY 17...	6.8	32	20	14	108	6	114	--	--	--	--	380
AUG 24...	8.0	46	20	14	124	12	--	.39	.01	.05	.14	90

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
AUG 24...	1030	<3	<10	20	<50	10	10	<10

01463500 DELAWARE RIVER AT TRENTON, NJ

(National stream quality accounting network, Pesticide program, and Radiochemical program)

LOCATION.--Lat 40°13'18", long 74°46'42", Mercer County, Hydrologic Unit 02040105, on left bank 450 ft (137 m) upstream from Calhoun Street Bridge at Trenton, 0.5 mi (0.8 km) upstream from Assunpink Creek, and at mile 134.5 (216.4 km).

DRAINAGE AREA.--6,780 mi² (17,560 km²).

WATER--DISCHARGE RECORDS

PERIOD OF RECORD.--Water years 1913 to current year. October 1912 to February 1913 monthly discharge only, published in WSP 1302. Gage-height record collected in this vicinity since 1904 are contained in reports of the National Weather Service.

REVISED DISCHARGE RECORDS.--WSP 951: Drainage area. WSP 1302: 1913-20. WSP 1382: 1924, 1928.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1965, at datum 7.77 ft (2.368 m) higher. Feb. 24, 1913, to Oct. 2, 1928, nonrecording gage on downstream side of highway bridge at site 500 ft (152 m) downstream.

REMARKS.--Discharge records excellent except those from Dec. 14 to Feb. 24, which are good. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lakes Wallenpaupack and Hopatcong, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, Neversink, and Wild Creek Reservoirs (see Delaware River Basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs and to Delaware and Raritan Canal. Water diverted just above station by borough of Morrisville, PA, and city of Trenton for municipal supply.

AVERAGE DISCHARGE.--66 years, 11,744 ft³/s (332.6 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 329,000 ft³/s (9,320 m³/s) Aug. 20, 1955 (elevation, 28.60 ft or 8.717 m, from high-water mark in gage house) from rating curve extended above 230,000 ft³/s (6,510 m³/s); minimum, 1,180 ft³/s (33.4 m³/s) Oct. 31, 1963, elevation, 7.26 ft (2.213 m). Flow in Delaware and Raritan Canal not included.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft (8.69 m) NGVD discharge estimated, 295,000 ft³/s (8,350 m³/s). Maximum elevation since 1903, 30.6 ft (9.33 m) NGVD, March 8, 1904, from floodmark (ice jam).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50,000 ft³/s (1,420 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Jan. 10	1700	*89,500	2,535	17.26	5.261
Jan. 27	2000	76,300	2,161	16.35	4.983
Mar. 28	1845	74,300	2,104	16.21	4.941

Minimum discharge, 3,040 ft³/s (86.1 m³/s) Sept. 28, 29, gage height, 8.02 ft (2.444 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14500	9710	23200	17200	26400	7000	45600	8760	14000	4830	4520	6530
2	13500	9330	29600	15200	23400	7230	39500	8280	13300	4450	4670	5070
3	21100	9270	34600	13800	20300	7090	43000	7780	12200	4640	4410	4300
4	20800	9450	32500	12400	18100	6850	39900	7330	12700	7830	3940	3900
5	16100	9270	28100	12100	15800	6620	36400	7090	12100	7000	4110	3620
6	12700	8730	27000	12300	14200	6260	34300	7380	11200	6120	4410	3360
7	11000	11100	23500	12200	13000	5860	33000	9020	10900	8390	10400	3290
8	10200	21200	20800	12400	13700	6760	32000	9630	10800	6620	12700	3420
9	11800	26700	18800	31100	13300	6950	32800	10700	12500	5770	13800	4520
10	16200	28000	17200	79200	13500	6120	29600	11900	15500	4950	10400	4190
11	21500	27300	15100	65800	12800	6120	25700	12600	14700	4480	8650	3730
12	18800	32000	14000	45800	12100	6530	23200	13000	12300	4370	9630	3560
13	15600	32800	11400	41000	11600	7530	23700	11700	11100	4330	12300	3490
14	13200	27500	13400	35200	11000	11500	23900	14300	11400	4260	8860	3420
15	14600	23400	22900	28200	11300	30200	22200	30000	10700	4410	6900	3360
16	17400	20000	29900	24800	10700	31600	19700	29100	10200	4600	6530	3360
17	24700	17800	33500	22100	10300	26000	17200	34900	9240	5270	5520	3690
18	33000	17500	33000	20400	10500	22100	15800	44900	8180	5350	5030	3690
19	44300	16700	33600	18400	10300	20200	15300	46300	7380	4450	4520	4950
20	39200	15300	28700	17500	9190	21700	15800	44600	7090	4300	4190	7930
21	37800	14000	32400	14700	8080	23100	16200	37500	7430	4220	4040	7530
22	33900	12600	41500	14400	8550	28900	16300	31800	7780	4080	3760	6040
23	27900	13000	35100	13300	8390	39500	15400	27600	7280	4450	3690	5310
24	23200	12900	28900	12500	8490	43700	13900	28900	6480	4220	3660	4990
25	20100	12000	26200	14000	8600	44400	12700	29600	6480	3800	3490	4260
26	17700	15000	27600	47700	8340	39500	12000	26500	5730	3620	3460	3560
27	16000	16900	27300	69500	7280	57100	11100	22300	5350	3690	3560	3390
28	14900	17300	24300	63400	6580	71200	10600	19100	5520	3620	5150	3420
29	13300	15600	21700	48300	---	67000	9910	16900	5230	3690	5190	3290
30	12100	14900	18900	36900	---	58900	9350	15100	5310	3830	4520	3490
31	10600	---	17400	30800	---	53000	---	13900	---	3730	4370	---
TOTAL	617700	517260	792100	902600	345800	776520	696060	638470	290080	149370	190380	128660
MEAN	19930	17240	25550	29120	12350	25050	23200	20600	9669	4818	6141	4289
MAX	44300	32800	41500	79200	26400	71200	45600	46300	15500	8390	13800	7930
MIN	10200	8730	11400	12100	6580	5860	9350	7090	5230	3620	3460	3290

CAL YR 1977 TOTAL 5195970 MEAN 14240 MAX 107000 MIN 2200
WTR YR 1978 TOTAL 6045000 MEAN 16560 MAX 79200 MIN 3290

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1944 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1968 to current year.
pH: June 1968 to current year.
WATER TEMPERATURES: October 1944 to current year.
DISSOLVED OXYGEN: October 1962 to current year.
SUSPENDED-SEDIMENT DISCHARGE: September 1949 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 400 micromhos Jan. 24, 1959; minimum, 50 micromhos Mar. 19, 1945.
pH: Maximum, 10.2 July 5, 6, 1971, June 14, 15, 1974; minimum, 5.3 June 22, 1972.
WATER TEMPERATURES: Maximum 34.0°C June 18, 1957; minimum 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 17.3 mg/L July 9, 1974; minimum, 4.0 mg/L Nov. 9, 1972.
SEDIMENT CONCENTRATIONS: Maximum daily, 1,720 mg/L Nov. 26, 1950; minimum daily, less than 0.5 mg/L Oct. 21, 1952 and Jan. 18, 1970.
SEDIMENT LOADS: Maximum daily, 1,087,000 tons (986,126 tonnes) Aug. 20, 1955; minimum daily, less than 0.5 ton (0.45 tonne) Oct. 21, 1952.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily, 306 mg/L Jan. 10; minimum daily, 1 mg/L Mar. 10, 12, Sept. 13, 14.
SEDIMENT LOADS: Maximum daily, 66,500 tons (60,300 tonnes) Jan. 10; minimum daily, 9.2 tons (8.4 tonnes) Sept. 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)
OCT										
21...	1255	39150	88	7.2	11.0	10.9	1.2	290	120	30
NOV										
28...	1015	17600	139	7.7	5.0	12.0	1.4	140	600	51
DEC										
19...	1030	34000	116	7.2	4.0	12.8	--	K720	--	20
JAN										
18...	1310	20700	134	7.4	1.0	14.0	1.1	K55	550	48
FEB										
17...	1100	10400	159	7.2	2.0	13.4	1.6	180	66	58
MAR										
23...	1215	40400	129	7.0	8.0	12.2	2.0	140	450	41
APR										
12...	1010	22700	104	--	9.0	11.6	1.5	K18	<1	37
MAY										
02...	1600	8230	159	9.4	14.5	15.2	3.9	K3	K1	67
JUN										
21...	1200	7780	176	8.8	24.0	8.6	2.8	35	660	66
JUL										
11...	1020	4480	190	8.9	25.0	10.4	3.1	22	--	75
AUG										
24...	1245	3730	238	9.4	26.0	11.8	3.8	K5	130	96
31...	0955	4370	--	--	--	--	--	--	--	--
SEP										
27...	1150	3260	223	8.1	18.0	9.6	2.3	12	80	92

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT										
21...	8.5	2.2	3.7	20	.3	1.3	18	15	16	5.5
NOV										
28...	14	4.0	5.4	18	.3	1.5	34	28	21	6.8
DEC										
19...	5.8	1.3	2.3	20	.2	.6	29	24	10	4.1
JAN										
18...	13	3.8	6.2	21	.4	1.1	26	21	17	9.1
FEB										
17...	15	5.1	7.5	21	.4	1.2	37	30	22	12
MAR										
23...	11	3.3	6.0	23	.4	1.4	26	21	17	8.4
APR										
12...	10	2.9	4.2	19	.3	1.0	23	19	14	6.1
MAY										
02...	18	5.3	6.3	17	.3	1.4	49	40	22	9.6
JUN										
21...	17	5.8	7.6	19	.4	1.7	--	41	24	11
JUL										
11...	19	6.8	8.3	19	.4	1.9	--	53	24	12
AUG										
24...	24	8.7	10	18	.4	2.2	--	60	29	13
31...	--	--	--	--	--	--	--	--	--	--
SEP										
27...	22	9.1	9.5	18	.4	2.0	--	56	29	14

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT 21...	.1	3.9	59	--	15	.52	.05	--	--	--
NOV 28...	.0	2.6	77	--	8	.89	.10	--	--	--
DEC 19...	.0	5.8	35	--	16	.92	.11	--	--	--
JAN 18...	.0	5.0	80	--	12	.90	.11	--	--	--
FEB 17...	.0	5.1	84	100	6	1.1	.19	.34	.53	.31
MAR 23...	.0	4.5	69	--	54	.80	.11	.62	.73	.30
APR 12...	.0	3.1	65	--	6	.62	.06	.19	.25	.01
MAY 02...	.1	.8	100	--	0	.63	.01	.34	.35	.10
JUN 21...	.1	1.2	124	--	3	.88	.01	.59	.60	.26
JUL 11...	.1	3.1	131	--	2	.89	.00	.54	.54	.28
AUG 24...	.1	3.2	163	--	--	.86	.00	1.1	1.1	.74
31...	--	--	--	--	--	--	--	--	--	--
SEP 27...	.1	3.9	143	--	2	1.6	.06	.24	.30	.00

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 21...	.60	--	.05	.02	6.8	--	--	46	4860	62
NOV 28...	.49	--	.06	.03	--	5.9	1.1	--	--	--
DEC 19...	.20	--	.05	.03	7.6	--	--	--	--	--
JAN 18...	.33	--	.06	.03	9.5	--	--	12	671	77
FEB 17...	.22	1.6	.06	.05	--	6.0	.6	8	225	100
MAR 23...	.43	1.5	.10	.02	3.9	--	--	101	11000	62
APR 12...	.24	.87	.03	.03	4.6	--	--	10	613	76
MAY 02...	.25	.98	.04	.03	--	7.3	.5	4	89	100
JUN 21...	.34	1.5	.06	.06	5.6	--	--	10	210	87
JUL 11...	.26	1.4	.08	.03	4.3	--	--	7	85	100
AUG 24...	.36	2.0	.17	.04	--	6.4	--	--	--	--
31...	--	--	--	--	--	--	--	22	260	95
SEP 27...	.30	1.9	.10	.09	3.2	2.8	.4	3	26	93

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	NOV 28,77	MAR 23,78	MAY 2,78	JUN 21,78	JUL 11,78	AUG 24,78
TIME	1015	1215	1600	1200	1020	1245
TOTAL CELLS/ML	660	950	4300	6600	170000	510000
DIVERSITY: DIVISION	1.4	0.0	0.7	1.1	1.3	0.6
.CLASS	1.6	0.0	0.7	1.1	1.3	0.6
..ORDER	1.8	0.0	1.6	2.0	1.5	0.6
...FAMILY	3.3	2.2	3.0	2.8	2.6	0.7
....GENUS	3.5	2.2	3.2	3.0	3.5	0.9

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	--	-	670	10	5100	3	3300	1
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	--	-	--	-	13000	7	*	0
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	72	2	--	-	--	-	--	-
....MICRACTINIUM	63	10	--	-	--	-	--	-	18000	10	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	8	1	--	-	*	0	190	3	4000	2	4300	1
....CHODATELLA	--	-	--	-	*	0	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	1400	1	33000	6
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	2900	2	--	-
....NEPHROCYTIUM	--	-	--	-	--	-	--	-	--	-	*	0
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-	*	0
....QUADRIGULA	--	-	--	-	--	-	--	-	*	0	*	0
....SELENASTRUM	--	-	--	-	*	0	--	-	5400	3	*	0
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	*	0
....TREUBARIA	--	-	--	-	--	-	--	-	--	-	*	0
....WESTELLA	--	-	--	-	--	-	--	-	--	-	5800	1
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	190	3	16000	9	*	0
....CRUCIGENIA	--	-	--	-	--	-	--	-	5800	3	--	-
....SCENEDESMUS	16	2	--	-	110	2	2200#	33	18000	11	9700	2
....TETRASTRUM	--	-	--	-	--	-	--	-	1400	1	*	0
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	--	-	1400#	21	1400	1	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	140	3	--	-	1800	1	*	0
...VOLVOCACEAE												
....GONIUM	--	-	--	-	--	-	--	-	1400	1	--	-
..ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	--	-	--	-	--	-	170	3	--	-	--	-
....SPONDYLOSIUM	--	-	--	-	*	0	--	-	--	-	--	-
..CHLOROCOCCALES												
...OOCYSTACEAE												
....GLOEOACTINIUM	--	-	--	-	--	-	--	-	1400	1	3300	1

NOTE: # - DOMINANT ORGANISM: EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED: LESS THAN 1/2%

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE TIME	NOV 28,77 1015		MAR 23,78 1215		MAY 2,78 1600		JUN 21,78 1200		JUL 11,78 1020		AUG 24,78 1245	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	32	5	--	-	1200#	27	400	7	9400	5	*	0
....MELOSIRA	--	-	--	-	--	-	--	-	--	-	*	0
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-	*	0
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	63	10	--	-	--	-	--	-	--	-	--	-
....COCCONEIS	16	2	14	1	--	-	--	-	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	32	5	190#	20	320	7	170	3	--	-	--	-
...DIATOMACEAE												
....DIATOMA	24	4	--	-	89	2	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	--	-	72	2	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	240	4	--	-	--	-
....HANNAEA	--	-	--	-	590	14	--	-	--	-	--	-
....SYNEDRA	16	2	290#	30	130	3	170	3	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	40	6	120	13	*	0	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	87	13	300#	31	770#	18	170	3	--	-	--	-
....NEIDIUM	24	4	--	-	--	-	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-	*	0	--	-	--	-
...NITZSCHIACEAE												
....NITZSCHIA	55	8	--	-	410	10	96	1	2200	1	*	0
...SURIRELLACEAE												
....SURIRELLA	--	-	41	4	140	3	--	-	--	-	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....DINOBRYON	16	2	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCOCCALES												
...CHROCOCCACEAE												
....AGMENELLUM	--	-	--	-	--	-	--	-	12000	7	4400000#	87
....ANACYSTIS	--	-	--	-	210	5	400	7	52000#	30	*	0
....COCCOCHLORIS	--	-	--	-	--	-	--	-	--	-	*	0
..HORMOGONALES												
...OSCILLATORIACEAE												
....OSCILLATORIA	160#	24	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	16	2	--	-	--	-	--	-	*	0	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
NOV 28...	1015	--	--	1	--	--	0	--	--	--	--	--
FEB 17...	1100	0	0	0	0	0	0	0	0	0	<10	<10
MAY 02...	1600	2	1	1	0	0	0	--	0	--	10	8
AUG 24...	1245	1	0	1	100	0	100	--	0	--	<10	<6
SEP 27...	1150	1	--	1	0	0	0	--	--	--	<10	<10

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)
NOV 28...	--	--	--	--	--	--	--	--	--	110	--	--
FEB 17...	0	0	0	0	6	4	2	410	--	20	5	1
MAY 02...	2	0	0	0	6	2	4	140	--	30	--	0
AUG 24...	4	3	1	2	8	5	3	1700	1700	30	--	--
SEP 27...	0	1	0	1	15	7	8	80	40	40	--	--

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)
NOV 28...	--	--	--	30	<.5	.0	<.5	--	--	0	--	--
FEB 17...	4	40	0	40	<.5	.0	<.5	0	0	0	0	0
MAY 02...	--	30	10	20	<.5	.0	<.5	0	0	0	0	0
AUG 24...	--	160	150	10	<.5	.0	<.5	0	0	0	0	0
SEP 27...	--	30	20	10	<.5	.0	<.5	1	0	1	0	0

DATE	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)
NOV 28...	--	--	--	150	--	--	--	--	--	--	--	--
FEB 17...	0	50	20	30	<.9	<.4	2.1	<.4	1.9	<.4	.12	.02
MAY 02...	0	20	10	10	--	--	--	--	--	--	--	--
AUG 24...	0	70	60	10	<1.0	.9	2.2	1.1	2.1	1.0	.04	.25
SEP 27...	0	20	10	10	--	--	--	--	--	--	--	--

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AROCLOR TOTAL 1254 PCB SERIES (UG/L)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ATRAZINE, TOTAL (UG/L)	ATRAZINE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL (UG/L)
NOV 28...	1015	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	1100	.0	--	--	ND	--	ND	--	ND	--	ND
MAY 02...	1600	--	ND	--	ND	--	ND	--	ND	--	ND
AUG 24...	1245	--	ND	--	--	--	ND	--	ND	--	ND

DATE	P,P' DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL (UG/L)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL (UG/L)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL (UG/L)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 28...	.9	ND	.9	ND	2.3	ND	ND	ND	ND	ND	ND
FEB 17...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 02...	--	ND	--	ND	--	ND	--	ND	--	ND	--
AUG 24...	--	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 28...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 02...	ND	--	ND	--	ND	--	ND	--	ND	--
AUG 24...	ND	--	ND	--	ND	--	ND	--	ND	--

DATE	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)
NOV 28...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 02...	ND	--	ND	--	ND	--	ND	--	ND	--
AUG 24...	ND	--	ND	--	ND	--	ND	--	--	--

DATE	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 28...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 17...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY 02...	ND	--	ND	--	--	--	--	--	--	--
AUG 24...	ND	--	ND	--	--	--	--	--	--	--

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	118	114	116	135	133	134	159	148	152	136	133	134
2	122	118	119	139	135	137	157	138	150	135	131	133
3	125	122	124	141	137	139	136	121	126	135	130	133
4	125	112	117	143	140	141	120	116	118	139	133	137
5	114	109	113	143	141	142	119	115	116	139	135	137
6	119	114	116	145	142	143	133	118	125	148	137	141
7	123	119	121	157	139	145	131	128	129	142	141	142
8	125	123	124	157	138	143	129	126	127	140	133	136
9	132	124	128	140	124	131	129	126	127	135	117	126
10	132	128	---	124	115	118	134	126	130	127	97	102
11	125	123	124	115	110	111	133	128	131	101	100	100
12	125	115	118	113	96	108	131	128	130	105	104	105
13	119	118	118	98	95	96	142	127	133	114	108	110
14	122	118	120	98	95	96	140	134	138	127	117	122
15	124	122	123	104	97	101	140	125	130	134	128	132
16	124	120	122	109	103	106	125	105	115	135	132	133
17	121	112	116	111	103	108	103	96	98	143	135	136
18	116	112	114	111	103	107	100	94	96	165	146	153
19	120	112	---	111	107	109	107	98	103	173	153	165
20	---	---	---	111	106	108	114	108	111	170	158	162
21	115	113	---	112	107	110	113	100	108	160	159	160
22	114	113	114	114	111	113	117	110	115	165	161	163
23	115	113	114	123	115	120	113	110	110	166	162	164
24	115	114	115	129	125	128	116	112	115	171	165	167
25	119	115	117	132	131	132	125	118	122	198	171	182
26	122	119	120	136	130	133	128	123	127	168	128	147
27	125	122	123	139	133	138	127	122	125	159	122	139
28	125	125	125	139	134	136	129	124	126	121	116	118
29	127	125	126	139	137	138	140	134	137	117	113	115
30	127	126	127	150	144	147	141	137	139	121	115	118
31	134	126	129	---	---	---	143	138	141	120	117	118
MONTH	134	109	120	157	95	124	159	94	124	198	97	136

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	130	119	124	---	---	---	---	---	---	184	178	181
2	132	126	129	195	192	---	---	---	---	175	153	162
3	139	127	133	199	193	196	---	---	---	167	160	163
4	141	134	137	213	197	205	---	---	---	184	180	182
5	142	135	139	221	199	208	---	---	---	204	186	193
6	146	139	143	217	202	209	---	---	---	222	205	214
7	151	145	148	215	206	210	---	---	---	225	211	220
8	156	147	149	222	212	218	---	---	---	207	185	193
9	151	149	150	218	196	206	---	---	---	187	181	184
10	149	145	146	203	199	201	---	---	---	187	178	183
11	147	146	---	224	204	213	---	---	---	183	161	176
12	---	---	---	226	219	222	---	---	---	160	150	155
13	---	---	---	230	207	219	---	---	---	---	---	---
14	---	---	---	224	205	---	128	120	---	---	---	---
15	---	---	---	---	---	---	132	123	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	130	120	---
18	---	---	---	---	---	---	---	---	---	143	127	133
19	---	---	---	---	---	---	147	127	---	128	115	123
20	---	---	---	---	---	---	166	151	160	118	101	110
21	---	---	---	---	---	---	173	168	170	107	102	106
22	---	---	---	---	---	---	174	155	170	113	107	110
23	---	---	---	138	128	---	176	150	169	120	112	117
24	---	---	---	---	---	---	177	150	171	143	120	131
25	---	---	---	---	---	---	183	180	182	146	128	137
26	---	---	---	---	---	---	187	173	182	145	141	144
27	---	---	---	---	---	---	183	175	178	145	130	141
28	---	---	---	---	---	---	193	180	187	148	140	146
29	---	---	---	---	---	---	197	188	194	151	140	148
30	---	---	---	---	---	---	196	186	191	151	143	150
31	---	---	---	---	---	---	---	---	---	161	143	152
MONTH	---	---	---	---	---	---	---	---	---	225	101	156

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	192	185	189	245	235	239	260	213	230
2	---	---	---	210	195	203	254	242	248	261	207	227
3	---	---	---	219	140	197	245	231	238	249	212	229
4	---	---	---	300	160	215	236	225	232	231	207	221
5	---	---	---	308	256	270	239	229	236	227	167	208
6	---	---	---	273	231	244	242	230	237	233	201	220
7	---	---	---	236	177	213	231	174	210	236	228	232
8	---	---	---	181	171	176	207	175	196	234	217	227
9	---	---	---	181	173	178	209	187	200	214	191	200
10	---	---	---	189	184	186	191	185	188	236	193	207
11	---	---	---	195	187	193	192	186	190	229	211	219
12	---	---	---	217	202	210	217	192	200	236	226	230
13	---	---	---	216	207	212	203	182	190	230	219	225
14	---	---	---	214	207	209	205	184	195	---	---	---
15	---	---	---	219	178	212	211	205	209	---	---	---
16	149	142	---	222	215	218	220	212	216	---	---	---
17	---	---	---	225	219	222	224	221	222	---	---	---
18	---	---	---	242	195	213	236	230	233	---	---	---
19	---	---	---	224	209	214	244	232	239	---	---	---
20	---	---	---	223	212	217	243	240	241	---	---	---
21	183	175	---	224	220	217	250	243	247	---	---	---
22	179	173	175	215	204	210	251	246	249	---	---	---
23	184	178	182	210	207	209	249	243	245	---	---	---
24	187	184	185	214	206	209	246	234	242	---	---	---
25	187	181	184	214	206	209	244	224	239	---	---	---
26	183	174	180	223	216	220	245	223	235	---	---	---
27	192	178	185	230	226	228	241	231	237	234	226	---
28	209	193	201	236	221	231	241	173	215	243	231	236
29	210	196	206	249	234	244	242	226	235	244	233	239
30	205	202	203	254	248	251	243	238	241	256	244	250
31	---	---	---	252	234	245	238	227	235	---	---	---
MONTH	---	---	---	308	140	215	254	173	225	---	---	---

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.2	7.1	7.2	7.5	7.4	7.5	7.3	7.1	7.2	7.3	7.3	7.3
2	7.3	7.1	7.2	7.5	7.3	7.4	7.3	7.2	7.2	7.4	7.3	7.4
3	7.3	7.1	7.2	7.4	7.2	7.3	7.2	7.1	7.2	7.5	7.4	7.4
4	7.3	7.1	7.2	7.3	7.1	7.2	7.2	7.2	7.2	7.4	7.4	7.4
5	7.3	7.2	7.2	7.3	7.1	7.2	7.2	7.2	7.2	7.4	7.3	7.3
6	7.3	7.3	7.3	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.3	7.3
7	7.4	7.2	7.3	7.1	7.0	7.1	7.4	7.3	7.4	7.3	7.2	7.3
8	7.4	7.3	7.4	7.2	6.9	7.1	7.4	7.3	7.4	7.2	7.2	7.2
9	7.4	7.3	7.3	7.2	7.1	7.2	7.5	7.3	7.4	7.4	7.0	7.3
10	7.4	7.3	---	7.2	7.1	7.1	7.5	7.4	7.5	7.4	6.9	7.1
11	7.5	7.3	7.4	7.2	7.1	7.2	7.5	7.4	7.4	7.0	6.9	6.9
12	7.5	7.2	7.4	7.2	7.1	7.2	7.4	7.3	7.4	7.1	7.0	7.0
13	7.5	7.2	7.3	7.2	7.1	7.2	7.4	7.3	7.3	7.1	7.0	7.0
14	7.5	7.4	7.4	7.2	7.2	7.2	7.4	7.2	7.3	7.1	7.0	7.0
15	7.5	7.3	7.4	7.2	7.1	7.1	7.3	7.2	7.2	7.2	7.2	7.2
16	7.4	7.2	7.3	7.2	7.1	7.1	7.3	7.2	7.2	7.3	7.2	7.3
17	7.3	7.2	7.3	7.2	7.1	7.1	7.2	7.1	7.2	7.2	7.2	7.2
18	7.3	7.0	7.2	7.3	7.2	7.2	7.2	7.1	7.2	7.2	7.1	7.2
19	7.2	7.0	---	7.3	7.2	7.2	7.2	7.1	7.2	7.3	7.2	7.2
20	---	---	---	7.3	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.3
21	7.3	7.2	---	7.3	7.1	7.2	7.2	7.0	7.2	7.3	7.3	7.3
22	7.3	7.2	7.3	7.2	7.1	7.2	7.3	7.2	7.2	7.3	7.3	7.3
23	7.3	7.3	7.3	7.2	7.2	7.2	7.3	7.1	7.2	7.4	7.3	7.3
24	7.4	7.3	7.4	7.2	7.1	7.2	7.2	7.1	7.2	7.4	7.3	7.3
25	7.4	7.4	7.4	7.2	7.2	7.2	7.3	7.1	7.2	7.3	7.1	7.2
26	7.4	7.4	7.4	7.3	7.2	7.2	7.4	7.3	7.4	7.3	6.9	7.0
27	7.3	7.3	7.3	7.3	7.2	7.3	7.4	7.3	7.4	7.4	7.0	7.2
28	7.3	7.3	7.3	7.4	7.2	7.3	7.4	7.3	7.3	7.0	7.0	7.0
29	7.4	7.3	7.4	7.4	7.4	7.4	7.4	7.3	7.3	7.1	7.0	7.0
30	7.4	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.3	7.2	7.1	7.1
31	7.5	7.4	7.5	---	---	---	7.3	7.2	7.2	7.2	7.1	7.2
MONTH	7.5	7.0	7.3	7.5	6.9	7.2	7.5	7.0	7.3	7.5	6.9	7.2

DELAWARE RIVER BASIN

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.2	7.1	7.1	---	---	---	---	---	---	9.4	9.2	9.3
2	7.2	7.1	7.2	7.7	7.5	---	---	---	---	9.6	9.3	9.4
3	7.2	7.1	7.2	7.6	7.4	7.5	---	---	---	9.7	9.1	9.4
4	7.3	7.2	7.2	7.7	7.4	7.6	7.9	7.7	---	9.4	8.5	9.1
5	7.3	7.2	7.2	7.8	7.5	7.6	---	---	---	8.6	7.7	8.2
6	7.3	7.2	7.2	7.8	7.5	7.6	---	---	---	8.2	7.8	8.0
7	7.3	7.2	7.2	7.9	7.5	7.7	---	---	---	9.0	7.9	8.4
8	7.3	7.2	7.2	7.9	7.4	7.6	---	---	---	8.4	8.0	8.2
9	7.3	7.2	7.3	7.9	7.4	7.6	---	---	---	8.2	7.8	8.0
10	7.3	7.2	7.2	7.8	7.3	7.5	---	---	---	8.0	7.9	8.0
11	7.3	7.2	---	8.0	7.3	7.7	---	---	---	8.4	8.1	8.2
12	---	---	---	8.0	7.4	7.7	---	---	---	8.4	8.0	8.3
13	---	---	---	8.1	7.4	7.8	---	---	---	---	---	---
14	---	---	---	8.2	7.4	---	7.5	7.0	---	---	---	---
15	---	---	---	---	---	---	7.0	6.8	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	7.1	7.0	---
18	---	---	---	---	---	---	---	---	---	6.8	6.8	6.8
19	---	---	---	---	---	---	7.2	6.8	---	6.8	6.7	6.7
20	---	---	---	---	---	---	7.1	6.9	7.0	6.7	6.6	6.7
21	---	---	---	---	---	---	7.2	7.1	7.2	6.7	6.6	6.7
22	---	---	---	---	---	---	7.7	7.3	7.4	6.7	6.6	6.7
23	---	---	---	8.0	7.6	---	8.0	7.5	7.6	6.7	6.6	6.7
24	---	---	---	---	---	---	8.3	7.7	7.8	6.7	6.6	6.6
25	---	---	---	---	---	---	8.0	7.9	8.0	7.1	6.7	6.8
26	---	---	---	---	---	---	8.5	8.1	8.3	6.9	6.8	6.8
27	---	---	---	---	---	---	9.1	8.6	8.8	7.3	6.9	7.0
28	---	---	---	---	---	---	9.3	8.8	9.0	7.1	7.0	7.1
29	---	---	---	---	---	---	8.8	8.4	8.6	7.5	7.2	7.2
30	---	---	---	---	---	---	9.0	8.5	8.7	7.6	7.3	7.4
31	---	---	---	---	---	---	---	---	---	8.1	7.2	7.6
MONTH	---	---	---	---	---	---	---	---	---	9.7	6.6	7.7

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	8.8	8.1	8.5	7.6	7.3	7.4	7.3	7.1	7.2
2	---	---	---	8.8	8.1	8.5	7.6	7.3	7.4	7.5	7.1	7.3
3	---	---	---	8.5	7.1	7.9	7.6	7.3	7.4	7.9	7.3	7.6
4	---	---	---	7.4	7.3	7.4	7.6	7.2	7.4	8.3	7.5	7.8
5	---	---	---	7.7	7.5	7.6	7.4	7.2	7.3	8.5	7.7	8.1
6	---	---	---	8.1	7.6	7.8	7.5	7.2	7.4	8.7	7.8	8.3
7	---	---	---	8.1	7.7	7.9	7.3	7.1	7.2	8.5	8.0	8.2
8	---	---	---	8.2	7.7	7.9	7.3	7.1	7.2	8.1	7.4	7.8
9	7.2	7.0	---	8.4	7.8	8.1	7.3	7.2	7.2	7.8	7.4	7.6
10	---	---	---	8.5	7.9	8.2	7.4	7.2	7.3	8.2	7.5	7.7
11	---	---	---	8.6	8.0	8.3	7.4	7.3	7.4	8.3	7.5	7.8
12	---	---	---	8.8	8.2	8.6	7.3	7.3	7.3	8.3	7.5	7.8
13	---	---	---	9.0	8.5	8.8	7.3	7.2	7.3	8.4	7.6	8.0
14	---	---	---	8.9	8.0	8.6	7.4	7.3	7.3	8.4	7.8	8.2
15	---	---	---	8.2	7.6	7.9	7.7	7.3	7.5	8.1	7.8	8.0
16	7.6	7.4	---	8.2	7.8	8.0	7.8	7.3	7.5	8.2	7.7	7.9
17	---	---	---	8.1	7.8	7.9	8.4	7.6	7.9	8.2	7.7	7.9
18	---	---	---	8.0	7.6	7.8	8.5	7.8	8.1	8.1	7.7	7.9
19	---	---	---	8.6	7.9	8.1	8.6	8.1	8.4	7.8	7.6	7.7
20	---	---	---	8.9	8.2	8.5	8.7	8.2	8.5	7.6	7.5	7.5
21	8.1	7.4	---	9.0	8.5	8.5	8.8	8.2	8.5	7.5	7.4	7.4
22	8.4	7.5	7.9	9.0	8.3	8.7	9.0	8.3	8.7	7.4	7.4	7.4
23	8.5	7.6	8.1	9.0	8.1	8.6	9.0	8.5	8.7	7.6	7.4	7.5
24	8.7	7.7	8.3	9.0	7.9	8.5	8.8	8.4	8.6	7.7	7.5	7.6
25	9.4	7.9	8.4	8.6	7.9	8.2	8.5	8.0	8.3	7.8	7.5	7.6
26	8.7	7.9	8.3	8.6	7.8	8.1	8.3	7.4	7.8	8.1	7.6	7.8
27	8.6	7.7	8.1	8.4	7.7	8.0	8.0	7.3	7.7	8.2	7.3	7.6
28	8.7	7.8	8.2	8.6	7.6	8.1	7.4	6.6	6.9	8.2	7.6	7.8
29	8.8	7.9	8.4	8.7	7.7	8.2	7.1	6.9	7.0	8.3	7.7	7.9
30	8.6	7.9	8.3	8.7	7.7	8.3	7.4	7.0	7.1	8.3	7.7	7.8
31	---	---	---	8.3	7.4	7.6	7.7	7.1	7.3	---	---	---
MONTH	---	---	---	9.0	7.1	8.2	9.0	6.6	7.6	8.7	7.1	7.8

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.0	17.0	17.5	12.0	11.5	11.5	6.0	5.0	5.5	3.0	2.5	2.5
2	19.0	17.5	18.5	12.5	12.0	12.0	6.0	5.5	6.0	2.5	2.0	2.5
3	17.5	16.0	17.0	13.5	12.5	13.0	6.0	5.5	5.5	2.0	1.5	2.0
4	16.5	15.0	16.0	14.5	13.5	14.0	5.5	5.0	5.5	2.0	1.0	1.5
5	16.0	14.0	15.0	15.5	14.5	15.0	5.5	5.0	5.5	2.0	1.0	1.5
6	16.5	14.0	15.5	15.0	14.5	14.5	5.0	4.5	5.0	3.5	2.0	3.0
7	17.5	15.0	16.0	14.5	13.5	14.0	4.5	3.5	4.0	3.5	3.0	3.5
8	16.0	14.5	15.0	13.5	13.0	13.5	3.5	3.0	3.0	4.5	3.5	4.0
9	15.5	14.5	15.0	13.5	13.0	13.0	3.0	2.0	3.0	6.0	3.5	5.0
10	15.0	14.0	---	13.5	13.0	13.0	2.0	1.5	1.5	3.5	0.5	1.5
11	15.0	13.0	14.5	13.0	11.5	12.0	1.5	1.0	1.5	1.0	0.5	1.0
12	14.5	12.0	13.5	11.5	10.0	11.0	1.5	1.0	1.0	1.5	1.0	1.0
13	15.0	13.5	14.5	10.0	8.0	9.0	2.0	1.5	1.5	1.5	1.0	1.5
14	13.0	12.5	12.5	8.0	7.5	7.5	3.5	2.0	2.5	2.0	1.5	2.0
15	14.0	13.0	13.5	8.0	7.0	7.5	4.0	3.0	3.5	1.5	1.0	1.5
16	13.0	12.0	12.5	8.5	7.5	8.0	3.5	3.0	3.5	1.5	1.0	1.0
17	12.5	11.0	11.5	9.5	8.5	9.0	3.5	3.0	3.0	1.5	1.0	1.5
18	11.0	10.0	10.5	9.5	9.0	9.0	3.5	3.0	3.5	2.5	1.5	2.0
19	12.0	10.0	---	9.0	8.5	9.0	4.0	3.5	4.0	2.5	1.5	2.0
20	---	---	---	8.5	8.0	8.5	4.5	4.0	4.0	1.5	1.5	1.5
21	11.5	11.0	---	8.5	8.0	8.0	5.5	4.5	5.0	1.5	1.5	1.5
22	11.5	10.5	11.0	8.5	8.0	8.5	5.0	4.0	4.5	2.0	1.5	1.5
23	11.5	11.0	11.0	8.0	8.0	8.0	4.0	4.0	4.0	2.0	1.5	1.5
24	11.5	10.5	11.0	8.5	8.0	8.5	4.5	4.0	4.0	2.0	1.5	2.0
25	11.5	10.5	11.0	8.5	8.0	8.0	5.0	4.5	4.5	2.0	2.0	2.0
26	11.5	11.0	11.5	8.0	6.5	7.5	4.5	3.0	4.0	3.0	1.5	2.0
27	12.5	11.5	12.0	6.5	6.0	6.0	3.0	2.0	2.5	1.5	0.5	1.0
28	14.0	12.5	13.0	6.0	5.5	5.5	2.5	1.5	2.0	1.0	0.5	1.0
29	14.0	13.0	13.5	5.0	4.5	5.0	1.5	1.5	1.5	1.5	1.0	1.0
30	14.0	12.5	13.0	5.0	4.5	5.0	2.5	1.0	1.5	2.0	1.0	1.5
31	12.5	11.5	12.5	---	---	---	3.0	2.5	3.0	2.0	1.5	2.0
MONTH	19.0	10.0	13.5	15.5	4.5	10.0	6.0	1.0	3.5	6.0	0.5	2.0

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.0	2.0	2.5	---	---	---	---	---	---	13.5	12.5	13.0
2	3.0	2.0	2.5	3.5	2.5	---	---	---	---	15.5	12.0	13.5
3	3.0	2.5	3.0	2.5	1.0	2.5	---	---	---	16.5	13.5	14.5
4	3.5	2.5	3.0	2.5	0.5	1.5	6.0	5.5	---	15.0	13.0	14.0
5	3.5	2.5	3.0	2.5	0.0	1.0	---	---	---	13.0	12.0	12.5
6	4.0	3.5	4.0	3.0	0.5	1.5	---	---	---	12.0	11.5	12.0
7	4.5	4.0	4.5	4.0	0.5	2.0	---	---	---	13.5	11.5	12.5
8	4.5	4.0	4.0	2.5	2.0	2.0	---	---	---	12.5	12.0	12.5
9	4.5	4.0	4.5	3.5	2.0	3.0	---	---	---	14.0	12.5	13.0
10	5.0	4.0	4.5	3.5	3.0	3.5	---	---	---	14.0	13.0	13.5
11	4.5	4.0	---	6.0	2.5	4.5	---	---	---	16.0	13.5	14.5
12	---	---	---	7.0	4.5	5.5	---	---	---	16.0	14.5	15.0
13	---	---	---	7.0	4.5	5.5	---	---	---	---	---	---
14	---	---	---	5.5	4.5	---	11.0	9.5	---	---	---	---
15	---	---	---	---	---	---	10.5	9.5	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	12.5	12.0	---
18	---	---	---	---	---	---	---	---	---	12.5	12.5	12.5
19	---	---	---	---	---	---	9.5	9.0	---	14.0	12.5	13.0
20	---	---	---	---	---	---	10.0	9.5	9.5	15.0	13.5	14.0
21	---	---	---	---	---	---	10.0	9.5	10.0	16.0	14.5	15.0
22	---	---	---	---	---	---	10.5	9.5	10.0	16.0	15.0	15.5
23	---	---	---	7.0	6.0	---	11.0	10.0	10.5	16.5	15.5	16.0
24	---	---	---	---	---	---	11.0	10.5	11.0	16.0	14.5	15.5
25	---	---	---	---	---	---	12.0	10.5	11.0	16.0	14.5	15.0
26	---	---	---	---	---	---	12.0	11.5	11.5	16.5	15.5	16.0
27	---	---	---	---	---	---	12.0	11.5	11.5	17.5	16.5	17.0
28	---	---	---	---	---	---	13.0	11.0	12.0	18.0	16.5	17.5
29	---	---	---	---	---	---	13.5	12.0	12.5	19.5	17.5	18.0
30	---	---	---	---	---	---	14.5	13.0	13.5	20.0	19.0	19.0
31	---	---	---	---	---	---	---	---	---	23.0	18.5	21.0
MONTH	---	---	---	---	---	---	---	---	---	23.0	11.5	15.0

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	25.5	22.5	24.0	23.0	22.5	22.5	24.0	23.0	23.5
2	---	---	---	24.0	22.0	23.0	23.5	22.0	23.0	24.5	22.0	23.5
3	---	---	---	22.5	20.0	21.5	25.0	23.0	24.0	25.0	22.5	23.5
4	---	---	---	20.0	19.0	19.5	25.0	24.0	24.5	25.0	22.5	23.5
5	---	---	---	22.0	18.5	20.5	24.5	23.5	24.0	25.5	21.5	23.5
6	---	---	---	24.0	20.5	22.0	25.5	23.5	24.5	26.5	22.5	24.5
7	---	---	---	24.0	21.5	22.5	25.0	24.0	24.5	26.0	23.5	24.5
8	---	---	---	25.5	22.5	23.5	25.5	24.0	24.5	24.0	20.0	22.5
9	21.0	19.5	---	27.0	23.5	25.0	25.5	24.0	24.5	22.5	19.5	21.0
10	---	---	---	27.0	24.5	25.5	25.5	24.0	25.0	21.5	19.5	20.5
11	---	---	---	26.5	23.5	25.0	24.5	23.5	24.0	23.0	20.0	21.0
12	---	---	---	26.0	22.5	24.0	24.5	23.5	24.0	24.0	21.5	22.5
13	---	---	---	26.5	23.0	24.5	24.5	23.5	24.0	23.0	21.0	22.0
14	---	---	---	24.0	23.0	23.5	26.0	23.5	24.5	21.5	20.0	20.5
15	---	---	---	26.0	22.0	24.0	26.0	24.5	25.0	20.0	19.5	20.0
16	21.0	19.5	---	24.5	23.5	24.0	26.5	24.5	25.5	21.5	19.5	20.5
17	---	---	---	24.5	23.0	23.5	28.0	25.5	26.5	22.5	20.0	21.0
18	---	---	---	26.0	22.0	24.0	27.5	25.5	26.5	22.5	21.0	21.5
19	---	---	---	27.0	23.5	25.0	28.0	25.0	26.5	21.5	20.0	21.0
20	---	---	---	28.0	24.5	26.0	27.0	25.5	26.0	21.0	19.5	20.5
21	23.5	22.0	---	28.5	25.5	27.0	27.5	24.0	25.5	22.0	20.0	21.0
22	24.0	22.0	23.0	29.0	26.0	27.5	27.5	24.0	25.5	21.5	20.5	21.0
23	24.5	22.0	23.0	30.0	27.0	28.5	28.0	24.0	26.0	21.0	20.0	20.5
24	24.5	22.0	23.0	30.0	27.0	28.0	27.5	24.5	26.0	21.5	19.0	20.0
25	25.0	22.0	23.5	27.0	24.5	25.5	26.0	23.5	24.5	21.5	19.5	20.5
26	24.0	22.5	23.0	26.5	24.0	25.0	26.0	23.0	24.0	21.0	18.5	19.5
27	25.5	22.0	23.5	27.0	24.0	25.5	25.5	23.5	24.5	20.5	18.0	19.0
28	26.5	23.5	24.5	27.0	24.5	25.5	24.5	23.0	24.0	20.0	18.0	19.0
29	27.0	24.0	25.0	26.5	24.0	25.0	26.5	23.5	25.0	19.5	17.0	18.5
30	26.0	23.5	24.5	27.0	24.5	25.5	26.0	24.0	25.0	19.5	17.0	18.0
31	---	---	---	25.0	23.0	24.0	25.5	24.0	24.5	---	---	---
MONTH	---	---	---	30.0	18.5	24.5	28.0	22.0	25.0	26.5	17.0	21.5

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.9	7.4	8.1	11.5	10.7	11.0	13.0	12.4	12.7	13.4	13.0	13.2
2	8.5	7.3	8.0	11.4	10.6	10.9	12.6	12.4	12.5	13.4	12.8	13.2
3	9.3	7.3	8.2	11.0	10.3	10.7	12.8	12.3	12.6	13.1	12.6	13.0
4	10.5	8.2	9.1	11.0	10.1	10.5	17.8	12.6	12.7	13.4	13.0	13.2
5	10.3	8.1	9.0	10.8	9.9	10.3	12.9	12.6	12.8	13.3	12.8	13.1
6	10.1	8.2	9.2	10.6	9.9	10.2	12.8	12.5	12.7	12.9	12.3	12.7
7	9.8	7.8	8.9	10.2	9.7	10.0	13.3	12.8	13.1	12.4	12.1	12.3
8	11.8	8.1	10.9	10.3	9.7	10.0	13.7	13.3	13.5	12.2	11.6	12.0
9	10.7	8.1	9.4	10.0	9.7	9.9	13.9	13.7	13.7	11.5	10.3	11.0
10	10.6	9.0	---	10.0	9.6	9.9	14.2	13.7	14.0	13.8	11.4	12.8
11	11.8	8.1	10.6	10.3	9.7	10.0	14.5	14.0	14.3	14.1	13.3	13.7
12	12.0	8.4	10.6	10.7	10.3	10.5	14.6	14.1	14.4	14.3	13.3	14.0
13	11.6	8.4	10.7	11.5	10.7	11.0	14.4	14.0	14.2	14.2	12.9	13.6
14	10.2	8.5	9.2	11.7	11.3	11.5	14.1	13.2	13.7	13.8	13.0	13.4
15	10.3	8.4	9.3	11.9	11.5	11.7	13.6	13.0	13.3	13.5	13.0	13.2
16	11.0	8.5	9.5	11.8	11.3	11.6	13.8	13.0	13.4	13.6	13.0	13.4
17	11.6	8.1	9.8	11.4	10.8	11.1	13.9	13.0	13.5	13.6	12.7	13.3
18	11.5	8.1	10.3	11.1	10.7	10.9	13.6	12.8	13.3	12.7	12.2	12.4
19	10.8	8.1	---	11.3	10.8	11.0	13.4	12.8	13.1	12.4	12.0	12.2
20	---	---	---	11.7	11.1	11.4	13.3	12.9	13.1	12.1	11.7	11.9
21	11.8	8.9	---	11.5	11.0	11.3	12.9	12.1	12.5	11.8	11.5	11.7
22	11.4	10.6	10.9	11.3	10.9	11.1	13.1	12.0	12.4	11.8	11.2	11.6
23	11.1	10.7	10.9	11.4	11.0	11.2	12.8	12.4	12.6	11.6	11.4	11.5
24	11.3	10.7	11.0	11.5	11.1	11.2	13.0	12.5	12.8	11.4	11.0	11.3
25	11.3	10.9	11.1	11.8	11.3	11.5	12.6	12.2	12.4	10.8	10.3	10.5
26	11.1	10.7	10.9	11.7	11.3	11.4	13.0	12.4	12.7	12.2	11.0	11.6
27	11.0	10.2	10.6	12.4	11.7	12.1	14.1	13.0	13.5	13.0	12.2	12.5
28	10.6	10.1	10.4	12.7	12.4	12.5	14.8	13.8	14.2	13.3	12.8	13.0
29	10.6	10.1	10.3	12.9	12.6	12.8	14.4	13.9	14.2	13.8	13.0	13.4
30	10.9	10.2	10.5	13.1	12.8	13.0	14.3	13.7	14.0	13.5	13.0	13.3
31	11.2	10.1	10.7	---	---	---	13.7	13.2	13.5	14.1	12.9	13.6
MONTH	12.0	7.3	9.9	13.1	9.6	11.1	14.8	12.0	13.3	14.3	10.3	12.6

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.1	12.3	12.6	---	---	---	---	---		---	---	---
2	12.7	12.0	12.3	15.1	14.3	---	---	---		16.6	12.5	---
3	12.3	11.7	12.0	14.8	13.9	14.3	---	---		16.6	10.6	---
4	12.0	11.2	11.6	15.1	13.8	14.5	15.0	13.7		13.9	10.2	11.4
5	11.6	11.0	11.3	15.5	14.1	14.8	---	---		11.3	9.3	10.1
6	12.2	11.1	11.5	15.6	14.2	14.9	---	---		11.7	9.2	10.4
7	11.7	11.1	11.3	15.9	14.1	14.9	---	---		13.9	9.9	11.9
8	12.0	11.3	11.7	15.4	13.8	14.5	---	---		12.6	10.9	11.7
9	12.3	11.6	11.9	15.7	13.6	14.5	---	---		11.9	10.0	10.9
10	12.4	11.7	12.0	14.9	13.3	14.0	---	---		10.9	7.8	9.7
11	12.4	11.6	---	16.0	13.0	14.4	---	---		10.4	8.2	---
12	---	---	---	16.0	12.9	14.2	---	---		10.0	8.4	---
13	---	---	---	15.8	12.7	14.1	---	---		---	---	---
14	---	---	---	13.2	12.1	---	11.0	9.5		---	---	---
15	---	---	---	---	---	---	11.9	9.8		---	---	---
16	---	---	---	---	---	---	---	---		---	---	---
17	---	---	---	---	---	---	---	---		10.0	8.7	---
18	---	---	---	---	---	---	---	---		9.8	8.5	9.1
19	---	---	---	---	---	---	---	---		9.8	8.9	9.3
20	---	---	---	---	---	---	---	---		9.2	8.4	8.9
21	---	---	---	---	---	---	---	---		9.2	8.3	8.5
22	---	---	---	---	---	---	---	---		8.7	8.2	8.4
23	---	---	---	11.6	9.6	---	---	---		8.7	8.4	8.5
24	---	---	---	---	---	---	---	---		8.7	7.9	8.3
25	---	---	---	---	---	---	---	---		10.9	7.9	8.6
26	---	---	---	---	---	---	---	---		8.9	8.4	8.6
27	---	---	---	---	---	---	---	---		11.3	8.2	8.8
28	---	---	---	---	---	---	---	---		8.7	7.8	8.1
29	---	---	---	---	---	---	---	---		9.5	7.7	8.0
30	---	---	---	---	---	---	---	---		9.1	7.5	7.7
31	---	---	---	---	---	---	---	---		10.5	7.2	8.2
MONTH	---	---	---	---	---	---	---	---		16.6	7.2	---

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	11.9	7.6	9.7	7.9	6.2	6.9	7.2	6.6	6.9
2	---	---	---	11.5	7.8	9.7	8.3	6.7	7.4	8.1	6.7	7.3
3	---	---	---	9.1	7.2	8.0	8.2	6.6	7.4	8.7	6.8	7.6
4	---	---	---	7.9	7.4	7.7	7.9	6.0	7.0	9.2	6.9	7.9
5	---	---	---	9.3	7.9	8.5	7.1	6.0	6.5	9.7	7.2	8.2
6	---	---	---	10.0	8.0	9.0	7.1	5.9	6.5	9.2	7.0	7.9
7	---	---	---	9.6	8.2	8.8	6.4	5.8	6.2	8.4	6.3	7.0
8	---	---	---	9.6	8.0	8.8	6.7	6.0	6.4	6.9	6.1	6.4
9	7.6	5.8	---	9.4	7.8	8.6	7.0	6.6	6.7	8.3	6.2	7.1
10	---	---	---	9.2	7.5	8.4	7.4	6.8	7.0	9.0	6.9	7.8
11	---	---	---	11.2	7.7	9.2	7.6	6.9	7.2	9.2	7.2	8.0
12	---	---	---	12.2	7.9	10.0	7.3	6.8	7.1	9.3	6.9	7.9
13	---	---	---	12.7	8.4	10.4	7.4	6.9	7.1	9.7	6.9	8.2
14	---	---	---	10.4	7.6	8.8	7.8	7.1	7.5	9.2	8.1	8.6
15	---	---	---	9.5	7.3	8.3	8.4	7.1	7.7	8.5	7.5	8.0
16	8.8	7.4	---	9.0	7.5	8.2	8.4	7.0	7.6	8.9	7.4	8.1
17	---	---	---	9.4	7.3	8.3	9.4	6.9	8.0	8.9	7.3	8.1
18	---	---	---	8.6	7.2	7.8	12.0	7.1	9.3	8.7	7.2	7.9
19	---	---	---	9.8	7.4	8.5	12.6	7.4	9.9	7.6	7.1	7.4
20	---	---	---	10.0	7.6	8.8	11.1	7.3	9.3	7.5	6.9	7.2
21	11.2	8.1	---	11.3	7.6	9.2	11.6	7.4	9.5	7.4	6.8	7.0
22	10.9	7.8	9.1	11.1	6.6	8.8	11.2	7.6	9.5	7.1	6.8	6.9
23	11.5	8.0	9.7	10.3	6.4	8.4	11.8	7.9	9.7	7.6	6.9	7.2
24	12.1	8.1	10.1	9.8	6.0	7.8	11.4	7.8	9.5	7.8	7.2	7.5
25	12.2	8.5	10.4	8.1	5.8	6.9	8.7	6.5	7.5	8.0	7.2	7.5
26	11.4	6.5	9.6	8.9	5.8	7.3	10.0	6.3	8.1	8.4	7.4	7.8
27	11.2	7.7	9.4	8.2	6.1	7.1	9.9	7.0	8.5	9.0	7.5	8.1
28	10.6	7.7	9.2	9.4	5.6	7.3	8.0	6.4	7.1	9.0	7.2	8.0
29	10.5	7.6	8.9	9.9	6.3	8.0	7.8	6.6	7.1	9.4	7.5	8.3
30	11.5	7.2	9.2	10.1	6.5	8.3	7.9	6.5	7.1	9.5	7.6	8.5
31	---	---	---	8.0	6.1	6.6	8.2	6.4	7.1	---	---	---
MONTH	---	---	---	12.7	5.6	8.4	12.6	5.8	7.7	9.7	6.1	7.7

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	6890	14	262	19900	10	564	6230	4	65
2	6440	15	263	21900	10	613	6120	2	37
3	6510	13	228	19800	10	535	5620	2	30
4	6830	13	252	17400	7	322	4760	2	27
5	7940	19	397	16400	5	217	4810	3	39
6	8150	15	327	16100	4	173	4670	3	38
7	6910	14	261	14900	4	160	4860	7	108
8	6420	17	300	13900	4	149	17200	110	5480
9	7400	18	371	13200	3	111	17400	67	3190
10	34300	56	6160	12700	3	102	15800	27	1160
11	50700	70	10100	11500	3	79	14000	22	830
12	29500	32	2550	10700	2	62	12400	18	597
13	21700	21	1210	10400	3	85	11100	14	432
14	18900	15	706	9990	3	81	8000	12	259
15	18100	10	447	9210	3	75	7700	10	208
16	16200	6	251	8890	3	72	7950	8	172
17	13000	4	127	8750	6	132	8250	9	200
18	11500	4	107	8490	8	182	7600	6	123
19	10600	4	114	8030	8	173	6800	4	73
20	11200	6	180	7720	8	166	6300	3	51
21	14500	15	627	7330	8	158	6150	3	50
22	33000	53	5170	7290	8	164	4500	1	12
23	35500	47	4620	7090	8	158	5650	2	31
24	25900	20	1420	6940	7	131	6550	2	35
25	22000	10	598	6710	7	119	5000	2	27
26	23200	12	741	6370	6	103	4700	2	25
27	26200	13	903	5690	6	89	4400	1	12
28	23800	9	580	5560	5	75	3950	2	21
29	20400	9	480	5480	5	74	4700	5	63
30	18100	8	387	5670	4	67	4250	4	46
31	16800	8	342	---	---	---	4350	4	47
TOTAL	558590	---	40481	324010	---	5191	231770	---	13488

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	3350	4	36	2200	2	12	27900	74	5570
2	3600	3	29	3160	5	43	26000	57	4060
3	3700	3	30	3000	4	32	21600	33	1970
4	4200	3	34	2770	4	30	21400	28	1600
5	4900	6	79	2720	3	22	47700	238	33300
6	4450	6	72	2920	5	39	55900	211	32400
7	4000	4	43	3520	5	48	43700	102	12100
8	3500	4	38	3940	7	74	33100	53	4790
9	4050	5	55	4670	11	139	26900	28	2020
10	4250	5	57	4730	12	153	23900	21	1380
11	3300	4	36	4080	10	110	22800	19	1190
12	3900	4	42	4270	8	92	23000	21	1300
13	3650	3	30	4850	10	131	26400	285	21900
14	4150	4	45	5670	14	214	72900	484	96700
15	4750	5	64	5300	13	247	107000	406	119000
16	4150	4	45	5050	10	165	69800	171	33500
17	2950	3	24	5270	19	296	50100	80	10800
18	2500	3	20	5270	17	270	40000	63	6890
19	4450	10	120	4970	8	118	33600	34	3080
20	4350	8	94	4440	9	128	28700	23	1750
21	4250	6	69	4150	11	138	24300	16	1030
22	4000	5	54	3970	17	204	31400	121	15200
23	3650	4	39	4050	24	270	62900	427	72100
24	3750	4	40	4930	37	545	50100	97	13600
25	3550	3	29	32200	923	85900	38200	38	4010
26	4400	5	59	26100	321	23500	31100	21	1740
27	3650	4	39	24400	89	5810	26500	16	1180
28	3050	3	25	27700	108	8090	23600	12	789
29	2950	3	24	---	---	---	24100	14	890
30	2750	2	15	---	---	---	28300	20	1500
31	2250	2	12	---	---	---	47700	60	7980
TOTAL	116400	---	1398	210300	---	126820	1190600	---	515319

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	54200	87	12800	17100	8	352	3690	4	42
2	45500	57	7120	14600	14	562	3760	4	40
3	44700	39	4720	13900	7	270	3790	5	47
4	50600	45	6090	13900	5	187	3530	6	53
5	54700	61	9050	13900	5	196	3380	6	55
6	51700	43	6040	15200	6	251	3230	6	57
7	46100	29	3640	19000	11	567	3890	14	152
8	39400	20	2140	17200	11	503	3960	11	120
9	33100	15	1320	14900	9	363	4160	7	73
10	27800	13	958	14400	13	503	4820	11	147
11	24300	10	642	15900	9	371	7100	18	347
12	22100	10	622	15500	6	269	8050	18	389
13	20300	12	637	14900	7	282	6280	12	202
14	18800	10	493	14100	8	309	5050	26	345
15	17300	9	421	13700	7	262	4230	12	136
16	15800	8	345	12400	6	201	4270	6	64
17	13900	7	251	11600	7	203	4130	6	71
18	11700	5	157	10500	5	144	3890	7	76
19	10800	3	92	9800	5	144	3820	8	86
20	10700	1	41	9800	6	159	3850	10	99
21	10100	2	45	9380	6	152	4020	11	119
22	9140	3	85	8960	6	146	4480	12	150
23	8400	3	69	7400	6	120	4780	12	158
24	8550	4	87	6550	6	106	4740	9	120
25	17000	20	961	6190	6	100	4300	7	87
26	29700	52	4180	5920	6	96	4300	12	140
27	30000	41	3340	5660	6	92	4890	28	363
28	26100	21	1480	5160	8	115	4560	19	237
29	23300	10	631	4340	7	80	4340	16	188
30	20000	8	459	3960	5	51	4340	24	282
31	---	---	---	3760	5	50	---	---	---
TOTAL	795790	---	68916	349580	---	7206	133630	---	4445

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	4230	21	243	3410	27	300	3320	6	57
2	3960	15	162	3380	54	498	3060	7	53
3	3760	11	109	3440	29	264	3170	7	60
4	3560	8	81	4930	30	410	2970	12	96
5	3020	7	60	4130	33	378	3030	15	115
6	2960	7	57	3560	19	186	2670	13	96
7	3080	14	121	3410	18	168	2640	15	109
8	3560	13	124	3350	17	156	2810	19	142
9	4130	19	216	3410	16	150	3140	18	152
10	4160	18	205	3960	15	164	2990	16	131
11	3890	12	132	4410	15	173	2730	17	124
12	3790	20	205	4090	14	153	2730	17	123
13	6950	219	4630	3660	13	129	2670	12	83
14	4560	46	589	3960	12	129	2520	8	54
15	4060	15	163	3560	13	121	2940	8	59
16	3850	13	132	3200	7	63	2850	11	82
17	4170	11	115	3320	8	69	3420	19	173
18	3350	11	96	3560	10	97	4200	35	394
19	3630	7	71	3760	10	106	5280	59	903
20	3960	8	91	3320	7	67	5880	46	775
21	4970	14	189	3200	19	172	5320	26	376
22	4300	11	127	3530	12	112	8150	60	1720
23	4300	12	139	3720	4	40	10800	81	2460
24	3470	15	137	3320	5	49	9140	44	1100
25	2860	10	73	3600	10	94	9320	17	421
26	3170	9	81	3500	14	134	19700	107	8150
27	3020	8	62	3320	8	73	39600	154	16400
28	2670	5	39	3240	6	48	39000	85	9260
29	2440	6	37	2580	6	42	24500	44	3010
30	2580	7	50	2490	8	55	17700	26	1240
31	2990	8	65	2640	7	48	---	---	---
TOTAL	115400	---	8601	108960	---	4648	248250	---	47918
YEAR	4383280		844431						

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	14500	17	662	9710	3	71	23200	25	1610
2	13500	20	725	9330	15	373	29600	66	5320
3	21100	38	2160	9270	10	249	34600	84	7870
4	20800	31	1750	9450	6	144	32500	29	2570
5	16100	19	837	9270	5	122	28100	13	970
6	12700	12	405	8730	5	122	27000	10	712
7	11000	9	251	11100	10	358	23500	9	563
8	10200	9	240	21200	48	2770	20800	8	438
9	11800	12	363	26700	80	5730	18800	7	355
10	16200	44	1950	28000	53	4020	17200	6	292
11	21500	33	1810	27300	22	1610	15100	5	219
12	18800	21	1060	32000	31	2760	14000	7	271
13	15600	12	523	32800	23	2080	11400	6	165
14	13200	12	413	27500	11	789	13400	6	226
15	14600	11	420	23400	6	367	22900	42	2560
16	17400	20	933	20000	5	270	29900	60	4750
17	24700	34	2290	17800	6	273	33500	27	2460
18	33000	60	5710	17500	6	300	33000	51	4700
19	44300	68	8280	16700	7	298	33600	23	2080
20	39200	54	5710	15300	5	191	28700	13	1040
21	37800	41	4190	14000	3	126	32400	35	3320
22	33900	19	1700	12600	3	109	41500	22	2460
23	27900	16	1210	13000	4	141	35100	12	1110
24	23200	15	932	12900	5	172	28900	14	1090
25	20100	10	531	12000	9	283	26200	16	1160
26	17700	6	267	15000	21	877	27600	19	1400
27	16000	6	248	16900	23	1060	27300	14	1040
28	14900	5	185	17300	11	513	24300	13	816
29	13300	3	121	15600	5	207	21700	9	537
30	12100	4	113	14900	4	175	18900	7	357
31	10600	3	90	---	---	---	17400	6	297
TOTAL	617700	---	46079	517260	---	26560	792100	---	52758

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	17200	6	279	26400	10	707	7000	3	58
2	15200	4	184	23400	9	569	7230	2	39
3	13800	4	149	20300	9	494	7090	2	38
4	12400	4	132	18100	8	399	6850	2	37
5	12100	4	129	15800	8	342	6620	3	61
6	12300	5	179	14200	8	306	6260	19	321
7	12200	6	219	13000	7	246	5860	7	105
8	12400	3	108	13700	7	260	6760	2	37
9	31100	46	5920	13300	7	252	6950	2	38
10	79200	306	66500	13500	6	220	6120	1	20
11	65800	191	34800	12800	6	209	6120	2	28
12	45800	99	13200	12100	8	261	6530	1	25
13	41000	63	7000	11600	6	181	7530	3	54
14	35200	41	3940	11000	5	162	11500	7	286
15	28200	27	2030	11300	6	190	30200	170	14800
16	24800	19	1240	10700	7	204	31600	136	12000
17	22100	15	900	10300	6	165	26000	46	3260
18	20400	12	662	10500	5	135	22100	26	1560
19	18400	9	440	10300	4	112	20200	23	1220
20	17500	6	303	9190	4	93	21700	28	1630
21	14700	5	186	8080	3	66	23100	35	2190
22	14400	4	141	8550	3	69	28900	44	3420
23	13300	3	104	8390	2	48	39500	88	9560
24	12500	3	87	8490	2	46	43700	99	11700
25	14000	7	271	8600	2	55	44400	76	9140
26	47700	204	32600	8340	2	47	39500	57	6090
27	69500	231	42900	7280	2	39	57100	174	27900
28	63400	124	21500	6580	3	47	71200	199	38100
29	48300	108	14200	---	---	---	67000	107	19500
30	36900	39	3990	---	---	---	58900	63	9960
31	30800	13	1120	---	---	---	53000	43	6110
TOTAL	902600	---	255413	345800	---	5924	776520	---	179287

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	45600	30	3730	8760	3	71	14000	14	529
2	39500	26	2800	8280	4	82	13300	18	625
3	43000	25	2930	7780	2	52	12200	53	1720
4	39900	24	2600	7330	2	40	12700	88	3030
5	36400	20	1950	7090	3	56	12100	41	1340
6	34300	16	1490	7380	3	62	11200	18	540
7	33000	15	1350	9020	4	97	10900	13	371
8	32000	19	1670	9630	5	138	10800	12	358
9	32800	17	1480	10700	7	211	12500	14	519
10	29600	14	1100	11900	9	298	15500	18	760
11	25700	11	757	12600	9	297	14700	19	773
12	23200	10	617	13000	12	397	12300	14	470
13	23700	6	362	11700	10	313	11100	11	320
14	23900	7	448	14300	56	2790	11400	13	387
15	22200	8	471	30000	180	14700	10700	10	285
16	19700	6	345	29100	84	6590	10200	7	204
17	17200	5	246	34900	62	5860	9240	15	363
18	15800	4	182	44900	89	10800	8180	41	900
19	15300	6	259	46300	73	9020	7380	17	342
20	15800	11	490	44600	57	6830	7090	5	96
21	16200	9	412	37500	44	4510	7430	6	123
22	16300	5	226	31800	35	2990	7780	9	180
23	15400	4	166	27600	26	1940	7280	12	229
24	13900	3	118	28900	34	2690	6480	11	200
25	12700	3	103	29600	36	2850	6480	10	178
26	12000	3	97	26500	27	1930	5730	11	164
27	11100	3	90	22300	20	1210	5350	13	183
28	10600	3	86	19100	15	768	5520	10	150
29	9910	3	80	16900	13	592	5230	8	114
30	9350	3	76	15100	13	531	5310	9	129
31	---	---	---	13900	12	439	---	---	---
TOTAL	696060	---	26731	638470	---	79154	290080	---	15582

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	4830	7	93	4520	6	79	6530	22	391
2	4450	7	80	4670	7	88	5070	13	182
3	4640	9	111	4410	8	95	4300	3	33
4	7830	34	730	3940	9	93	3900	2	19
5	7000	25	482	4110	10	107	3620	2	18
6	6120	12	195	4410	9	103	3360	3	26
7	8390	9	203	10400	181	5890	3290	2	14
8	6620	10	172	12700	97	2990	3420	7	68
9	5770	8	132	13800	44	1640	4520	9	112
10	4950	7	98	10400	38	1070	4190	12	138
11	4480	6	68	8650	31	732	3730	4	40
12	4370	6	66	9630	38	987	3560	2	19
13	4330	5	64	12300	80	2610	3490	1	11
14	4260	5	54	8860	55	1360	3420	1	9.2
15	4410	4	48	6900	26	483	3360	2	15
16	4600	5	62	6530	21	364	3360	3	29
17	5270	7	100	5520	17	253	3690	6	56
18	5350	8	115	5030	11	147	3690	4	40
19	4450	7	79	4520	8	93	4950	7	99
20	4300	7	77	4190	6	72	7930	21	460
21	4220	6	73	4040	5	50	7530	26	532
22	4080	5	59	3760	3	33	6040	18	298
23	4450	5	60	3690	3	30	5310	13	187
24	4220	4	50	3660	5	49	4990	9	123
25	3800	4	41	3490	3	31	4260	6	67
26	3620	5	46	3460	3	27	3560	5	48
27	3690	6	57	3560	2	19	3390	4	33
28	3620	5	52	5150	42	624	3420	3	28
29	3690	5	50	5190	16	218	3290	3	27
30	3830	5	53	4520	5	64	3490	3	28
31	3730	6	60	4370	7	79	---	---	---
TOTAL	149370	---	3630	190380	---	20480	128660	---	3150.2
YEAR	6045000		714748.2						

01464600 DELAWARE RIVER AT BRISTOL, PA-BURLINGTON, NJ BRIDGE

LOCATION.--Lat 40°04'55", long 74°51'58", Bucks County, Hydrologic Unit 02040201, at center of river 1,300 ft (396 m) upstream from bridge on a line from the Pennsylvania bank through channel station -79.2 to Lehigh range light on New Jersey bank.

DRAINAGE AREA.--7,163 mi² (18,508 km²).

PERIOD OF RECORD.--August 1949 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to September 1975, July 1978 to current year.
pH: October 1967 to September 1975, July 1978 to current year.
WATER TEMPERATURES: October 1954 to September 1975, July 1978 to current year.
DISSOLVED OXYGEN: October 1961 to September 1975, July 1978 to current year.

REMARKS.--Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-O.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 397 micromhos Nov. 1, 1970; minimum, 54 micromhos June 5, 1968.
pH: Maximum, 9.2 Sept. 28, 29, 1978; minimum, 3.9 Sept. 2, 1978.
WATER TEMPERATURES: Maximum, 31.0°C July 9, 1966; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 16.0 mg/L Jan. 12, 1974; minimum, 0.0 on several days during 1963, 1965, and 1967.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT										
06...	1530	108	--	17.0	--	--	39	22	11	2.7
NOV										
03...	1400	148	--	14.0	--	--	51	27	14	4.0
APR										
25...	0755	144	7.3	12.5	10.6	20	49	30	13	4.0
JUN										
05...	1330	178	6.6	25.0	7.6	20	56	26	15	4.6
JUL										
12...	1315	216	6.6	26.5	4.7	22	75	36	19	6.7
AUG										
16...	1355	198	7.3	25.0	7.2	19	76	40	20	6.3
SEP										
26...	1345	254	7.6	21.5	8.1	18	65	26	12	8.6

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
06...	4.8	21	.3	1.5	20	--	16	--	18	6.3
NOV										
03...	6.8	22	.4	1.6	30	--	25	--	22	8.9
APR										
25...	7.5	24	.5	1.5	23	0	19	1.8	20	11
JUN										
05...	7.6	22	.4	1.7	37	0	30	15	23	11
JUL										
12...	9.8	22	.5	1.9	48	0	39	19	27	13
AUG										
16...	9.0	20	.5	2.6	44	0	36	3.5	28	13
SEP										
26...	13	29	.7	2.8	48	0	39	1.9	35	18

01464600 DELAWARE RIVER AT BRISTOL, PA-BURLINGTON, NJ BRIDGE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 06...	67	--	--	--	--	--	--	--	--	--
NOV 03...	98	--	--	--	--	--	--	--	--	--
APR 25...	98	.70	.03	.73	.32	.43	.75	1.5	.17	.07
JUN 05...	107	--	--	.74	--	--	--	--	.14	.05
JUL 12...	149	2.1	.01	2.1	.06	.78	.84	2.9	.14	.05
AUG 16...	130	1.4	.01	1.4	.12	.86	.98	2.4	.15	.08
SEP 26...	154	1.9	.12	2.0	.16	1.0	1.2	3.2	.18	.06

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 06...	--	--	--	--	--	--	--	--	--
NOV 03...	--	--	--	--	--	--	--	--	--
APR 25...	--	--	--	--	--	--	--	--	7.0
JUN 05...	--	--	--	--	--	--	--	--	3.3
JUL 12...	1	0	10	56	12	.5	47	70	5.5
AUG 16...	2	2	<10	42	35	<.5	48	60	4.6
SEP 26...	--	--	--	--	--	--	--	--	5.3

01464600 DELAWARE RIVER AT BRISTOL, PA-BURLINGTON, NJ BRIDGE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	257	252	254	263	230	250
2				---	---	---	260	254	256	247	213	230
3				---	---	---	261	256	257	229	207	223
4				---	---	---	262	251	258	226	197	215
5				---	---	---	261	247	257	219	193	206
6				---	---	---	260	237	254	209	196	202
7				---	---	---	254	230	245	209	201	203
8				---	---	---	---	---	---	219	203	209
9				---	---	---	---	---	---	236	207	219
10				---	---	---	---	---	---	240	212	228
11				---	---	---	---	---	---	244	224	235
12				---	---	---	---	---	---	252	234	243
13				---	---	---	---	---	---	254	238	248
14				---	---	---	---	---	---	257	231	249
15				---	---	---	---	---	---	260	241	253
16				---	---	---	208	198	200	272	244	257
17				---	---	---	207	194	200	267	248	260
18				---	---	---	215	199	207	269	257	264
19				---	---	---	222	199	210	272	262	268
20				---	---	---	228	203	216	273	267	271
21				---	---	---	230	209	221	277	273	274
22				---	---	---	234	209	225	277	267	273
23				---	---	---	239	219	230	274	263	269
24				---	---	---	247	225	236	270	254	263
25				---	---	---	251	227	241	263	244	254
26				---	---	---	258	237	248	256	239	249
27				---	---	---	265	245	254	255	235	245
28				254	251	252	263	252	259	249	233	242
29				256	250	254	---	---	---	245	233	239
30				257	250	254	---	---	---	242	236	239
31				255	252	253	264	257	262	---	---	---
MONTH				257	250	253	265	194	238	277	193	243

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	6.2	4.9	5.6	5.4	4.0	4.6
2				---	---	---	5.9	4.5	5.2	5.2	3.9	4.4
3				---	---	---	6.1	4.3	5.2	5.6	4.1	4.7
4				---	---	---	6.0	4.7	5.3	6.6	4.2	5.1
5				---	---	---	5.9	4.5	5.1	6.4	4.4	5.4
6				---	---	---	5.8	4.4	5.1	6.8	4.8	5.6
7				---	---	---	6.3	5.3	5.5	7.2	5.4	6.1
8				---	---	---	---	---	---	6.1	5.1	5.7
9				---	---	---	---	---	---	7.7	4.8	5.8
10				---	---	---	---	---	---	7.8	5.6	6.4
11				---	---	---	---	---	---	7.9	6.0	6.7
12				---	---	---	---	---	---	8.1	6.1	6.9
13				---	---	---	---	---	---	8.4	6.4	7.2
14				---	---	---	---	---	---	8.2	7.0	7.5
15				---	---	---	---	---	---	7.6	7.0	7.2
16				---	---	---	7.2	6.1	6.4	7.6	6.5	7.0
17				---	---	---	7.9	5.6	6.4	7.5	6.6	7.0
18				---	---	---	7.2	5.5	6.2	7.4	6.6	7.0
19				---	---	---	7.0	5.1	5.9	6.9	6.2	6.6
20				---	---	---	7.8	5.2	6.1	6.9	5.8	6.2
21				---	---	---	7.9	5.4	6.4	7.2	6.0	6.4
22				---	---	---	8.4	6.1	7.0	6.7	6.0	6.3
23				---	---	---	8.5	6.4	7.4	7.6	5.9	6.6
24				---	---	---	8.5	6.5	7.4	8.3	6.3	7.0
25				---	---	---	7.2	6.0	6.6	8.3	6.5	7.2
26				---	---	---	7.2	5.2	6.2	8.1	6.1	7.2
27				---	---	---	6.8	5.3	6.0	8.7	6.4	7.4
28				6.3	5.2	5.7	---	---	---	9.2	7.2	8.2
29				6.2	4.1	5.2	---	---	---	9.2	7.1	8.2
30				6.7	4.5	5.5	---	---	---	9.0	7.5	8.3
31				6.5	4.8	5.7	6.3	4.8	5.0	---	---	---
MONTH				6.7	4.1	5.5	8.5	4.3	6.0	9.2	3.9	6.5

DELAWARE RIVER BASIN

01464600 DELAWARE RIVER AT BRISTOL, PA-BURLINGTON, NJ BRIDGE

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	25.5	25.0	25.5	26.5	25.0	26.0
2				---	---	---	25.0	24.5	25.0	26.0	25.0	25.5
3				---	---	---	25.0	24.5	25.0	25.5	24.5	25.0
4				---	---	---	25.0	24.0	24.5	25.0	24.5	25.0
5				---	---	---	24.5	23.5	24.5	25.0	24.0	24.5
6				---	---	---	24.5	23.5	24.0	25.0	24.5	24.5
7				---	---	---	24.5	23.5	24.0	25.5	24.5	25.0
8				---	---	---	---	---	---	25.0	24.5	24.5
9				---	---	---	---	---	---	24.5	24.0	24.5
10				---	---	---	---	---	---	24.5	23.5	24.0
11				---	---	---	---	---	---	24.5	23.5	24.0
12				---	---	---	---	---	---	24.5	24.0	24.0
13				---	---	---	---	---	---	24.5	23.5	24.0
14				---	---	---	---	---	---	23.5	23.0	23.5
15				---	---	---	---	---	---	23.0	22.5	23.0
16				---	---	---	25.0	24.5	25.0	23.0	22.5	22.5
17				---	---	---	26.0	25.0	25.0	23.0	22.5	23.0
18				---	---	---	26.5	25.5	26.0	23.0	22.5	23.0
19				---	---	---	27.0	25.5	26.0	23.0	22.5	23.0
20				---	---	---	27.0	26.0	26.5	23.0	22.0	22.5
21				---	---	---	27.0	26.0	26.5	23.0	22.5	22.5
22				---	---	---	27.0	26.0	26.5	22.5	22.0	22.5
23				---	---	---	27.0	26.0	26.5	22.0	21.5	22.0
24				---	---	---	27.0	26.5	27.0	22.0	21.5	21.5
25				---	---	---	27.0	26.0	26.5	22.0	21.5	21.5
26				---	---	---	26.0	25.5	26.0	21.5	21.0	21.5
27				---	---	---	26.0	25.5	26.0	21.5	21.0	21.0
28				29.5	28.5	29.0	26.0	25.5	25.5	21.5	20.5	21.0
29				29.5	28.0	29.0	---	---	---	21.0	20.0	20.5
30				29.0	28.0	28.5	---	---	---	20.5	20.0	20.5
31				28.0	25.5	27.0	27.0	26.0	26.5	---	---	---
MONTH				29.5	25.5	28.5	27.0	23.5	25.5	26.5	20.0	23.0

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	7.3	7.2	7.3	7.3	7.0	7.1
2				---	---	---	7.3	7.2	7.2	7.1	7.0	7.0
3				---	---	---	7.3	7.1	7.2	7.1	6.9	7.0
4				---	---	---	7.3	7.1	7.2	7.1	6.9	7.0
5				---	---	---	7.2	7.1	7.2	7.1	6.8	6.9
6				---	---	---	7.2	7.1	7.1	7.0	6.9	6.9
7				---	---	---	7.2	7.1	7.1	7.1	6.9	7.0
8				---	---	---	---	---	---	7.0	6.9	7.0
9				---	---	---	---	---	---	7.2	6.9	7.0
10				---	---	---	---	---	---	7.2	7.0	7.1
11				---	---	---	---	---	---	7.3	7.0	7.1
12				---	---	---	---	---	---	7.3	7.0	7.2
13				---	---	---	---	---	---	7.5	7.1	7.2
14				---	---	---	---	---	---	7.4	7.1	7.3
15				---	---	---	---	---	---	7.3	7.1	7.2
16				---	---	---	7.3	7.0	7.1	7.2	7.1	7.1
17				---	---	---	7.3	7.0	7.1	7.2	7.1	7.1
18				---	---	---	7.4	7.1	7.2	7.3	7.0	7.2
19				---	---	---	7.3	7.1	7.2	7.3	7.2	7.2
20				---	---	---	7.6	7.1	7.2	7.2	7.1	7.2
21				---	---	---	7.7	7.1	7.3	7.3	7.1	7.2
22				---	---	---	7.9	7.3	7.5	7.2	7.1	7.2
23				---	---	---	8.2	7.4	7.6	7.3	7.1	7.2
24				---	---	---	8.2	7.5	7.7	7.4	7.1	7.2
25				---	---	---	7.7	7.4	7.5	7.7	7.1	7.3
26				---	---	---	7.7	7.3	7.4	7.6	7.2	7.4
27				---	---	---	7.5	7.3	7.4	7.6	7.2	7.4
28				7.6	7.3	7.4	7.4	7.3	7.3	7.8	7.2	7.5
29				7.6	7.3	7.4	---	---	---	7.8	7.2	7.4
30				7.8	7.3	7.5	---	---	---	7.7	7.3	7.5
31				7.5	7.3	7.4	7.5	7.2	7.3	---	---	---
MONTH				7.8	7.3	7.4	8.2	7.0	7.3	7.8	6.8	7.2

01464743 NESHAMINY CREEK NEAR DOYLESTOWN, PA

LOCATION.--Lat 40°17'12", long 75°09'38", Bucks County, Hydrologic Unit 02040201, at the intersection of Almshouse and Lower State Roads in Castle Valley, 0.8 mi (1.3 km) downstream form Mill Creek, 2.3 mi (3.7 km) southwest of Doylestown.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 12...	0800	9813	9813	400	7.5	12.0	8.0	--	--	120
NOV 21...	0830	9813	9813	430	--	--	--	--	--	126
DEC 12...	1400	9813	9813	450	--	--	--	--	--	137
JAN 11...	1200	9813	9813	240	--	--	--	--	--	79
FEB 27...	1400	9813	9813	500	--	--	--	--	--	130
MAR 08...	0930	9813	9813	500	--	--	--	--	--	130
APR 14...	--	9813	9813	470	--	--	--	--	--	106
MAY 17...	1500	9813	9813	220	--	--	--	2.4	--	60
JUN 19...	0900	9813	9813	500	--	--	--	--	--	130
JUL 13...	1200	9813	9813	500	--	--	--	--	22	111
AUG 24...	0930	9813	9813	700	7.6	22.0	4.8	--	24	151
SEP 28...	1515	9813	9813	700	2.5	21.0	--	--	48	151

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, TOTAL (MG/L AS F)
OCT 12...	0	--	35	--	8.0	100	44	52	.1
NOV 21...	--	28	--	15	--	66	50	50	.1
DEC 12...	--	36	--	12	--	76	42	33	.1
JAN 11...	--	20	--	7.4	--	40	30	23	.1
FEB 27...	--	36	--	12	--	98	56	90	--
MAR 08...	--	29	--	17	--	96	40	74	--
APR 14...	--	26	--	12	--	74	50	50	--
MAY 17...	--	49	--	.0	--	42	32	23	--
JUN 19...	--	32	--	13	--	100	75	69	--
JUL 13...	--	31	--	9.0	--	98	45	84	--
AUG 24...	0	39	--	13	--	120	55	130	.1
SEP 28...	0	43	--	11	--	102	60	60	--

01464743 NESHAMINY CREEK NEAR DOYLESTOWN, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
OCT									
12...	322	16	--	3.9	.30	1.3	.76	350	.12
NOV									
21...	300	10	310	.14	.14	.96	1.1	220	.03
DEC									
12...	306	4	310	4.2	.17	.88	.77	220	--
JAN									
11...	116	20	136	2.8	.06	.70	.29	1476	.05
FEB									
27...	106	28	134	2.9	.16	5.6	1.5	220	--
MAR									
08...	376	10	386	3.7	.15	5.4	2.9	270	--
APR									
14...	268	268	286	3.4	.32	3.4	.92	210	--
MAY									
17...	158	24	182	1.9	.05	.54	.23	870	--
JUN									
19...	366	14	380	4.2	.59	4.4	2.7	260	--
JUL									
13...	284	4	288	2.1	.33	6.7	1.4	380	--
AUG									
24...	450	14	--	4.7	.67	3.6	1.8	330	.26
SEP									
28...	428	16	--	7.0	.48	2.4	3.4	240	--

01464985 LITTLE NESHAMINY CREEK AT JACKSONVILLE, PA

LOCATION.--Lat 40°14'24", long 75°03'15", Bucks County, Hydrologic Unit 02040201, 45 ft (14 m) upstream of bridge on Walton Road, 0.67 mi (1.0 km) south of Jacksonville, 2.3 mi (3.6 km) upstream from Neshaminy Creek.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)
OCT										
12...	0900	9813	9813	460	7.4	12.0	7.4	--	--	110
NOV										
21...	0930	9813	9813	410	--	--	--	--	--	120
DEC										
12...	1300	9813	9813	390	--	--	--	--	--	110
JAN										
11...	1100	9813	9813	275	--	--	--	--	--	86
FEB										
27...	1300	9813	9813	450	--	--	--	--	--	110
MAR										
08...	1000	9813	9813	490	--	--	--	--	--	130
APR										
14...	--	9813	9813	430	--	--	--	--	--	100
MAY										
17...	1430	9813	9813	220	--	--	--	3.6	--	60
JUN										
19...	1000	9813	9813	440	--	--	--	--	--	112
JUL										
13...	1200	9813	9813	190	--	--	--	--	36	55
AUG										
10...	1400	9813	9813	500	8.0	26.0	8.3	--	26	123

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	MAGNESIUM, DISSOLVED (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)
OCT									
12...	0	--	29	--	9.5	194	46	44	.2
NOV									
21...	--	25	--	15	--	62	56	39	.1
DEC									
12...	--	28	--	11	--	60	42	36	--
JAN									
11...	--	20	--	9.9	--	46	33	29	.1
FEB									
27...	--	30	--	11	--	74	50	59	--
MAR									
08...	--	32	--	15	--	88	50	69	--
APR									
14...	--	28	--	10	--	66	58	37	--
MAY									
17...	--	18	--	3.8	--	40	32	18	--
JUN									
19...	--	28	--	1	--	66	55	40	--
JUL									
13...	--	14	--	5.2	--	42	20	42	--
AUG									
10...	0	31	--	11	--	80	40	60	--

01464985 LITTLE NESHAMINY CREEK AT JACKSONVILLE, PA--Continued

WATER QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT 12...	226	12	--	4.6	.22	.30	1.9	460	.10
NOV 21...	292	18	310	.19	.19	.85	1.3	350	.09
DEC 12...	266	6	272	4.2	.17	.08	2.1	250	--
JAN 11...	180	60	240	3.5	.11	.77	.61	1676	.06
FEB 27...	142	18	160	3.3	.25	3.3	1.9	250	--
MAR 08...	276	10	286	5.0	.19	4.2	3.0	210	--
APR 14...	266	266	284	3.4	.42	3.4	1.8	240	--
MAY 17...	180	20	200	2.4	.07	.50	.37	150	--
JUN 19...	364	--	--	4.4	.44	.30	3.6	410	--
JUL 13...	78	372	450	3.7	.29	2.7	1.3	18630	--
AUG 10...	334	<5	--	7.3	.26	.18	2.6	330	--

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA

LOCATION.--Lat 40°10'26", long 74°57'26", Bucks County, Hydrologic Unit 02040201,on left bank at bridge on State Highway 213, 0.3 mi (0.5 km) downstream from Mill Creek, and 1.7 mi (2.7 km) west of Langhorne.

DRAINAGE AREA.--210 mi² (544 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 1332: 1949. WSP 1432: 1936-37.

GAGE.--Water-stage recorder. Datum of gage is 40.57 ft (12.366 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some regulation at low flow by mills above station. Flow regulated by upstream reservoirs on Little Neshaminy Creek, Robin Run, Pine Run, North Branch Neshaminy Creek, and Core Creek (combined flood control capacity, about 9,560 acre-ft (11.8 hm³). Occasional regulation by Springfield Lake, capacity, 650 mil gal (2.460 hm³), completed in 1934; no significant regulation except during period May 1934 to January 1944, when the lake was filling, and in September 1949, July 1954, July through October 1957, September, October 1961. Interceptor sewer installed along left bank in May, June 1966.

AVERAGE DISCHARGE.--44 years, 286 ft³/s (8.10 m³/s), 18.49 in/yr (470 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft³/s (1,400 m³/s) Aug. 19, 1955, gage height, 22.84 ft (6.962 m), from floodmarks, from rating curve extended above 4,700 ft³/s (133 m³/s) on basis of contracted-opening measurement at gage height 15.94 ft (4.859 m), and slope-area measurement of peak flow; minimum, 1.9 ft³/s (0.054 m³/s) Sept. 8, 1957; minimum gage height, 0.35 ft (0.107 m) Sept. 1, 2, 1963.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Aug. 23, 1933, reached a stage of 17.3 ft (5.27 m), from floodmark, discharge, 30,000 ft³/s (850 m³/s), from rating curve extended as explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 8	1000	5,710	162	8.00	2.438	Mar. 15	2130	4,630	131	7.15	2.179
Dec. 18	2130	8,380	237	9.81	2.990	Mar. 27	1600	5,850	166	8.11	2.472
Dec. 21	1430	7,520	213	9.27	2.825	May 14	1730	5,150	146	7.57	2.307
Jan. 9	0800	6,910	196	8.86	2.701	May 18	0500	3,830	108	6.47	1.972
Jan. 26	1530	*14,900	422	*13.05	3.978	May 24	1630	4,860	138	7.34	2.237
Mar. 14	2400	7,000	198	8.92	2.719	July 4	0200	4,700	133	7.21	2.198

Minimum discharge, 42 ft³/s (1.19 m³/s) Oct. 7; minimum gage height, 0.84 ft (0.256 m) Aug. 25, 26, 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	67	2180	262	349	138	432	127	286	97	179	396
2	80	69	743	248	329	127	384	120	244	83	115	200
3	60	73	455	217	287	127	328	118	221	500	108	132
4	51	82	365	191	259	130	324	118	265	2040	118	108
5	46	84	373	227	349	164	436	170	227	364	125	91
6	45	79	653	207	971	122	356	176	188	265	122	83
7	44	1590	398	204	1480	119	332	147	203	240	173	77
8	45	3540	287	234	1310	117	316	135	336	206	113	71
9	146	716	277	3800	749	109	268	380	328	132	89	79
10	310	398	241	889	468	114	247	630	206	118	83	69
11	138	361	217	500	349	138	348	261	170	127	91	63
12	90	295	241	400	314	269	408	203	155	113	279	65
13	71	238	217	350	211	743	376	179	194	95	690	67
14	73	204	280	1600	194	2640	244	1850	215	91	215	85
15	627	188	1390	711	182	4150	179	1210	152	147	140	65
16	317	176	602	369	179	1960	170	800	137	130	130	77
17	194	207	411	333	170	820	162	1580	127	237	99	75
18	201	525	2840	1860	161	685	251	2470	127	206	87	69
19	138	262	2970	892	158	978	221	880	127	130	75	152
20	176	201	975	558	149	1370	590	585	118	102	67	152
21	155	182	4220	482	167	1090	432	408	127	89	59	97
22	117	185	1570	373	152	1580	237	328	380	83	54	77
23	97	637	799	317	155	850	200	324	179	75	54	69
24	86	482	679	349	143	690	206	2490	130	67	50	63
25	79	314	700	948	143	540	173	1590	111	61	48	57
26	82	1340	632	10600	149	1250	165	765	106	63	48	83
27	90	510	341	3110	152	5020	155	560	191	65	47	54
28	99	329	302	1160	138	1600	150	400	130	120	990	48
29	99	295	273	716	---	810	155	364	111	122	428	45
30	82	506	291	501	---	590	140	320	122	77	182	43
31	69	---	280	411	---	488	---	316	---	91	147	---
TOTAL	3977	14135	26202	33019	9817	29528	8385	20004	5613	6336	5205	2812
MEAN	128	471	845	1065	351	953	280	645	187	204	168	93.7
MAX	627	3540	4220	10600	1480	5020	590	2490	380	2040	990	396
MIN	44	67	217	191	138	109	140	118	106	61	47	43
CFSM	.61	2.24	4.02	5.07	1.67	4.54	1.33	3.07	.89	.97	.80	.45
IN.	.70	2.50	4.64	5.85	1.74	5.23	1.49	3.54	.99	1.12	.92	.50

CAL YR 1977	TOTAL 98443	MEAN 270	MAX 4280	MIN 25	CFSM 1.29	IN 17.44
WTR YR 1978	TOTAL 165033	MEAN 452	MAX 10600	MIN 43	CFSM 2.15	IN 29.23

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 12...	1000	9813	9813	92	430	7.6	12.0	8.7	--	102
NOV 21...	1030	9813	9813	179	340	--	--	--	--	108
DEC 12...	1130	9813	9813	276	370	--	--	--	--	108
JAN 16...	1000	9813	9813	365	310	--	--	--	--	82
FEB 27...	1130	9813	9813	158	410	--	--	--	--	114
MAR 08...	1400	9813	9813	119	410	--	--	--	--	116
MAY 17...	1330	9813	9813	1320	190	--	--	--	--	52
JUN 19...	1100	9813	9813	128	360	--	--	--	--	102
JUL 13...	1200	9813	9813	95	360	--	--	--	12	94
AUG 28...	1200	9813	9813	2350	340	7.3	22.5	7.4	60	86

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT 12...	0	--	31	--	6.0	360	44	46	.2
NOV 21...	--	25	--	12	--	52	46	30	.1
DEC 12...	--	27	--	11	--	96	38	32	--
JAN 16...	--	20	--	8.2	--	42	30	34	.1
FEB 27...	--	29	--	11	--	64	42	45	--
MAR 08...	--	31	--	10	--	76	50	47	.1
MAY 17...	--	13	--	4.9	--	40	26	14	--
JUN 19...	--	24	--	11	--	66	50	31	--
JUL 13...	--	26	--	7.7	--	64	30	33	--
AUG 28...	0	24	--	6.5	--	58	35	34	.1

01465500 NESHAMINY CREEK NEAR LANGHORNE, PA--Continued

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT 12...	282	16	--	4.4	.20	.41	.58	940	.05
NOV 21...	228	16	244	.10	.10	.24	.57	360	.04
DEC 12...	250	2	252	3.3	.10	.65	.43	390	--
JAN 16...	190	20	210	3.7	.06	.33	1.0	868	--
FEB 27...	184	28	212	4.6	.02	2.1	.71	210	--
MAR 08...	270	20	290	4.4	.11	2.5	.80	230	--
MAY 17...	136	84	220	2.1	.06	.47	.34	3450	--
JUN 19...	224	10	234	4.1	.05	.14	.90	430	--
JUL 13...	228	54	282	3.7	.04	.12	.65	2010	--
AUG 28...	196	1336	--	.28	.05	.25	2.6	4700	<.02

DATE	TIME	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
AUG 28...	1200	<3	70	50	60	1170	60	220

01465770 POQUESSING CREEK AT TREVOSE ROAD, PHILADELPHIA, PA

LOCATION.--Lat 40°07'55", long 74°59'40", Bucks County, Hydrologic Unit 02040202, on right bank 30 ft (9 m) downstream from Trevose Road Bridge, 1 mi (1.6 km) southwest of Trevose.

DRAINAGE AREA.--5.08 mi² (13.2 km²).

PERIOD OF RECORD.--July 1964 to current year.

REVISED RECORDS.--WDR PA-72: 1970(M), 1971(P). WDR PA-75-1: 1971(P), 1972(P), 1973(P), 1974(P). WDR PA-76-1: 1972(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 120 ft (37 m), from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 7.42 ft³/s (0.210 m³/s), 19.84 in/yr (504 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) Aug. 28, 1971, gage height, 8.38 ft (2.554 m) in gage well, 9.10 ft (2.774 m) outside, from floodmark, from rating curve extended above 800 ft³/s (22.7 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 0.1 ft³/s (0.003 m³/s) Aug. 31, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 8	0130	442	12.5	4.81	1.466	May 24	0845	555	15.7	5.36	1.634
Dec. 1	0145	408	11.6	4.61	1.405	Aug. 3	0800	500	14.2	5.10	1.554
Jan. 9	0200	468	13.3	4.94	1.506	Aug. 11	1445	400	11.3	4.56	1.390
Jan. 26	0615	622	17.6	5.63	1.716	Aug. 28	0700	*856	24.2	*6.43	1.960

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Oct. 8, gage height, 1.39 ft (0.424 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	2.1	68	5.4	5.7	4.2	7.7	5.2	6.4	4.2	7.4	7.4
2	2.5	2.3	6.7	6.1	5.4	4.2	7.0	5.2	6.1	4.2	3.0	3.9
3	2.0	3.7	5.2	5.7	5.4	4.2	7.0	4.9	6.1	97	37	3.5
4	1.9	3.0	4.6	5.2	5.2	4.2	7.4	9.0	6.4	12	6.1	3.2
5	1.8	2.5	22	6.1	4.6	4.2	9.9	9.0	6.4	4.6	10	3.1
6	2.2	2.2	7.7	4.9	4.6	4.0	7.0	5.7	5.7	4.0	9.9	3.0
7	1.8	124	4.9	4.6	6.7	4.2	7.7	5.4	14	3.6	10	2.8
8	2.0	68	4.4	15	4.6	4.0	7.0	7.4	17	3.4	3.6	2.9
9	28	6.1	5.2	84	4.6	4.2	6.4	38	8.3	3.2	3.0	2.7
10	3.6	4.7	4.0	6.4	4.4	4.4	6.4	8.0	5.7	3.4	4.4	2.5
11	2.5	4.1	3.8	5.2	4.4	10	7.0	6.1	5.4	3.2	30	2.5
12	2.3	4.0	3.5	4.6	4.4	18	7.0	5.7	5.2	3.0	17	3.4
13	2.0	4.0	4.0	9.9	4.4	22	6.4	5.7	18	2.7	5.7	2.8
14	9.1	4.2	33	40	4.9	52	5.7	71	5.7	7.4	3.6	2.3
15	33	3.6	13	7.7	4.5	24	5.7	9.4	5.2	8.3	4.4	3.4
16	4.3	3.9	6.7	5.4	4.4	12	5.7	22	4.9	3.8	3.2	2.5
17	6.4	12	8.3	13	4.7	14	5.7	12	5.2	13	2.8	2.5
18	3.1	4.4	93	66	4.4	9.4	5.7	22	4.9	3.8	2.7	4.4
19	3.1	3.5	16	8.7	4.4	11	16	8.3	5.2	3.0	2.7	4.4
20	6.2	3.2	8.0	8.3	4.6	8.0	17	7.4	4.9	2.8	2.5	2.2
21	2.9	3.7	89	7.0	4.2	8.7	7.0	7.0	12	2.7	2.3	2.2
22	2.6	4.1	9.4	6.4	4.0	12	6.1	6.4	9.0	2.7	2.3	2.7
23	2.4	45	7.4	6.4	4.0	6.7	5.7	6.1	4.9	2.7	2.3	2.3
24	2.4	7.0	6.7	6.7	4.0	6.1	5.7	134	4.6	2.5	2.3	2.0
25	2.5	6.0	12	72	5.4	5.4	5.7	12	4.4	2.5	2.4	2.2
26	2.9	40	6.7	209	5.4	62	5.4	8.3	4.4	2.3	2.3	1.9
27	7.7	5.5	5.2	14	4.6	54	5.4	8.0	16	9.0	2.2	1.9
28	2.5	4.5	4.9	9.0	4.4	11	5.4	7.4	4.9	14	114	1.9
29	2.2	6.5	4.9	7.4	---	9.0	5.2	7.4	4.9	2.7	20	1.9
30	2.2	16	5.4	6.7	---	8.3	5.2	7.0	4.4	2.3	4.0	1.8
31	2.1	---	6.7	6.1	---	8.0	---	6.7	---	13	11	---
TOTAL	154.9	403.8	480.3	662.9	132.3	413.4	212.2	477.7	216.2	247.0	342.1	86.2
MEAN	5.00	13.5	15.5	21.4	4.73	13.3	7.07	15.4	7.21	7.97	11.0	2.87
MAX	33	124	93	209	6.7	62	17	134	18	97	114	7.4
MIN	1.8	2.1	3.5	4.6	4.0	4.0	5.2	4.9	4.4	2.3	2.2	1.8
CFSM	.98	2.66	3.05	4.21	.93	2.62	1.39	3.03	1.42	1.57	2.17	.57
IN.	1.13	2.96	3.52	4.85	.97	3.03	1.55	3.50	1.58	1.81	2.50	.63

CAL YR 1977 TOTAL 2594.14 MEAN 7.11 MAX 126 MIN .71 CFSM 1.40 IN 18.99
WTR YR 1978 TOTAL 3829.00 MEAN 10.5 MAX 209 MIN 1.8 CFSM 2.07 IN 28.03

01465785 WALTON RUN AT PHILADELPHIA, PA

LOCATION.--Lat 40°05'22", long 74°59'37", Philadelphia County, Hydrologic Unit 02040202, on right bank 110 ft (34 m) downstream from bridge on Decatur Road, 1 mi (1.6 km) upstream from mouth, Philadelphia.

DRAINAGE AREA.--2.17 mi^2 (5.62 km^2).

PERIOD OF RECORD.--July 1964 to September 1978 (discontinued).

REVISED RECORDS.--WDR PA-75-1: Datum.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 75.49 ft (23.009 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--14 years, 3.38 ft^3/s (0.096 m^3/s), 21.15 in/yr (537 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,430 ft^3/s (40.5 m^3/s) Aug. 27, 1967, gage height, 9.46 ft (2.883 m), from rating extended above 740 ft^3/s (21.0 m^3/s) on basis of step-backwater analysis; no flow part of each day July 23-24, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s (7.08 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 7	unknown	unknown		unknown		June 7	1705	511	14.5	6.18	1.884
Nov. 8	unknown	unknown		unknown		July 3	1700	274	7.76	4.81	1.466
Dec. 1	0120	261	7.39	4.74	1.445	Aug. 6	2345	660	18.7	7.10	2.164
Jan. 9	unknown	450	12.7	5.80	1.768	Aug. 11	unknown	*664	18.8	*7.12	2.170
Jan. 26	0530	501	14.2	6.12	1.865	Aug. 28	unknown	unknown		unknown	
May 24	1120	479	13.6	5.98	1.823						

Minimum daily discharge, 0.29 ft^3/s (0.008 m^3/s), Jan. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	.76	35	.72	1.5	1.3	1.5	1.1	5.6	.81	7.6	2.4
2	.90	.90	1.5	.90	1.4	1.2	1.4	1.1	1.3	.80	.78	.90
3	.50	1.2	1.0	.84	1.4	1.2	1.5	1.2	1.2	50	28	.74
4	.42	3.0	.86	.64	1.3	1.7	2.2	6.1	1.4	3.5	6.4	.75
5	.39	.70	14	.68	1.3	1.2	3.1	4.0	1.3	1.1	8.7	.91
6	.60	1.0	1.7	.80	1.3	1.2	1.5	1.5	1.2	.94	35	1.0
7	.45	50	.81	.71	1.3	1.3	2.1	1.2	22	.92	13	.90
8	.40	40	.70	5.0	1.5	1.1	1.3	3.0	6.1	.84	2.0	.93
9	25	2.5	.95	35	1.5	1.4	1.2	19	4.1	.84	.91	.91
10	2.0	1.0	.52	2.0	1.4	1.7	1.3	2.0	1.2	.91	2.5	.90
11	.60	.80	.48	.80	1.4	6.0	2.1	1.3	1.1	.97	56	.90
12	.50	.66	.45	.70	1.3	5.3	1.9	1.2	1.1	.81	15	2.8
13	.60	.56	.67	7.6	1.4	5.0	1.5	1.1	4.5	.84	4.0	1.4
14	2.0	.74	15	19	1.9	15	1.4	33	1.1	3.8	2.0	.79
15	15	.60	2.8	.96	1.8	5.0	1.3	2.3	1.1	1.6	2.2	1.2
16	1.1	1.0	.92	.55	1.6	4.9	1.3	11	1.1	2.1	4.0	.75
17	3.1	7.0	.73	9.8	1.6	6.1	1.4	3.2	1.2	7.0	1.5	.76
18	.74	1.0	49	25	1.3	2.9	1.4	6.5	.95	1.0	1.2	.84
19	.80	.60	4.6	.71	1.3	2.5	11	1.6	1.1	.88	1.0	1.5
20	2.5	.50	1.5	.55	1.3	2.2	7.6	1.3	1.1	.88	1.5	.87
21	.70	.80	35	.71	1.3	2.5	1.6	1.2	9.9	.83	1.0	.83
22	.60	1.9	2.5	.33	1.3	3.5	1.3	1.2	3.0	.81	1.1	.84
23	.50	21	1.2	.29	1.3	2.1	1.1	1.2	1.1	.80	2.0	.81
24	.60	1.3	1.0	.31	1.3	1.5	1.2	75	1.3	.84	1.2	.67
25	.56	3.5	6.0	28	2.4	1.3	1.2	3.3	1.2	.84	2.0	.71
26	1.0	15	1.0	86	2.1	31	1.2	1.7	1.3	.85	1.0	.75
27	4.5	.93	.80	3.1	1.5	21	1.2	1.3	9.9	9.4	2.0	.74
28	.80	.93	.70	1.9	1.4	2.8	1.2	1.2	1.1	4.0	40	.74
29	.65	3.2	.90	1.7	---	2.0	1.1	1.2	.91	.80	1.2	.72
30	.80	12	1.0	1.7	---	1.7	1.1	1.3	.90	.80	.89	.66
31	.70	---	1.5	1.5	---	1.7	---	1.3	---	12	5.1	---
TOTAL	71.51	175.08	184.79	238.42	41.4	139.3	60.2	192.6	90.36	112.51	250.78	29.62
MEAN	2.31	5.84	5.96	7.69	1.48	4.49	2.01	6.21	3.01	3.63	8.09	.99
MAX	25	50	49	86	2.4	31	11	75	22	50	56	2.8
MIN	.39	.50	.45	.29	1.3	1.1	1.1	1.1	.90	.80	.78	.66
CFSM	1.07	2.69	2.75	3.54	.68	2.07	.93	2.86	1.39	1.67	3.73	.46
IN.	1.23	3.00	3.17	4.09	.71	2.39	1.03	3.30	1.55	1.93	4.30	.51

CAL YR 1977 TOTAL 1256.34 MEAN 3.44 MAX 85 MIN .01 CFSM 1.59 IN 21.53
WTR YR 1978 TOTAL 1586.57 MEAN 4.35 MAX 86 MIN .29 CFSM 2.01 IN 27.19

01465790 BYBERRY CREEK AT CHALFONT ROAD, PHILADELPHIA, PA

LOCATION.--Lat 40°05'01", long 74°58'57", Philadelphia County, Hydrologic Unit 02040202, on right bank 200 ft (61 m) downstream from Chalfont Road Bridge, 0.2 mi (0.3 km) downstream from Walton Run, Philadelphia.

DRAINAGE AREA.--5.34 mi² (13.8 km²).

PERIOD OF RECORD.--June 1965 to September 1978 (discontinued).

REVISED RECORDS.--WDR PA-75-1: Datum.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 46.84 ft (14.277 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, May 11 to June 27, which are poor.

AVERAGE DISCHARGE.--13 years, 8.70 ft³/s (0.246 m³/s), 22.12 in/yr (562 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,930 ft³/s (54.7 m³/s) Aug. 28, 1971, gage height, 12.47 ft (3.801 m), from floodmark, from rating curve extended above 950 ft³/s (26.9 m³/s); minimum, 0.4 ft³/s (0.011 m³/s) August 4, 1965; minimum gage height, 1.27 ft (0.387 m) June 4, 1965, before completion of control.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	1415	456	12.9	6.36	1.940	May 24	Unknown		Unknown		Unknown
Nov. 8	0845	456	12.9	6.36	1.940	July 3	1745	440	12.5	6.24	1.902
Dec. 1	0130	400	11.3	5.92	1.804	Aug. 7	0130	1,030	29.2	9.47	2.886
Jan. 9	0230	516	14.6	6.79	2.070	Aug. 11	1630	*1,240	35.1	*10.30	3.139
Jan. 26	0645	754	21.4	8.17	2.490	Aug. 28	0745	738	20.9	8.09	2.466

Minimum daily discharge, 1.6 ft³/s (0.045 m³/s) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	2.6	73	4.2	5.7	4.6	4.9	3.5	7.0	2.8	13	12
2	2.5	2.8	7.1	4.9	5.3	4.2	4.2	3.5	5.5	2.6	2.8	3.2
3	1.8	3.1	4.6	4.9	5.3	4.2	4.6	3.5	5.0	105	23	2.7
4	1.7	7.1	3.9	3.9	5.3	5.3	6.6	8.5	5.0	13	22	2.4
5	1.6	2.4	29	3.9	5.3	4.2	8.8	15	4.8	4.2	14	2.8
6	2.4	3.1	8.2	4.2	4.9	4.2	4.2	5.0	4.7	3.6	17	4.3
7	1.7	108	3.9	3.9	6.2	4.2	6.2	4.0	60	3.3	130	3.1
8	1.7	125	3.6	17	6.2	3.6	4.2	5.0	15	3.1	5.3	2.6
9	58	6.6	4.6	93	5.7	3.9	3.9	45	9.0	3.3	3.2	2.6
10	3.6	3.3	3.3	8.2	5.3	5.3	3.9	6.6	6.0	3.3	7.7	2.8
11	2.1	2.8	3.3	5.3	4.9	16	5.7	4.2	5.0	3.3	141	2.8
12	1.9	2.6	3.1	4.9	4.6	16	6.2	4.0	4.5	3.1	45	9.4
13	2.1	2.4	3.3	18	4.6	16	3.6	4.0	15	2.8	15	5.7
14	13	2.6	36	57	5.7	37	3.3	60	4.5	11	8.5	2.1
15	41	2.4	13	8.2	5.7	16	3.3	10	4.0	11	10	4.0
16	2.8	3.1	4.6	5.3	5.3	14	3.3	20	4.0	8.2	11	2.2
17	7.1	18	3.9	18	5.7	16	3.3	15	4.0	16	9.4	2.4
18	2.4	2.8	104	81	4.9	8.8	3.3	18	4.5	3.6	6.6	3.2
19	2.6	2.4	18	9.5	4.9	8.2	25	8.0	4.5	3.1	4.8	5.9
20	6.6	2.2	9.5	9.5	4.9	6.2	20	6.0	4.0	3.1	5.0	2.3
21	2.2	2.8	84	7.1	4.9	6.6	7.0	5.5	15	3.1	4.3	2.2
22	2.1	3.9	9.5	6.2	4.6	10	5.0	5.0	10	3.3	4.6	2.7
23	1.9	50	6.2	5.3	4.6	5.3	4.7	5.0	5.0	3.3	5.5	2.2
24	2.1	5.4	5.4	5.3	4.6	4.2	4.5	200	3.5	2.8	4.7	2.0
25	2.1	9.5	14	87	8.8	3.9	4.5	15	3.3	2.6	5.4	2.1
26	2.4	38	4.9	220	7.7	66	4.5	9.0	3.2	2.6	4.3	2.3
27	11	3.9	4.6	16	5.3	53	4.5	8.0	20	16	8.5	2.3
28	2.6	3.6	4.2	9.5	4.6	9.5	6.0	7.0	3.6	15	102	2.4
29	2.2	10	4.6	7.7	---	5.7	4.0	6.5	3.6	2.8	8.8	2.4
30	2.4	19	4.9	6.6	---	4.9	3.5	6.0	3.3	2.6	4.0	2.7
31	2.4	---	6.6	6.2	---	4.9	---	6.0	---	25	23	---
TOTAL	195.5	451.4	488.8	741.7	151.5	371.9	176.7	521.8	246.5	288.5	669.4	101.8
MEAN	6.31	15.0	15.8	23.9	5.41	12.0	5.89	16.8	8.22	9.31	21.6	3.39
MAX	58	125	104	220	8.8	66	25	200	60	105	141	12
MIN	1.6	2.2	3.1	3.9	4.6	3.6	3.3	3.5	3.2	2.6	2.8	2.0
CFSM	1.18	2.81	2.96	4.48	1.01	2.25	1.10	3.15	1.54	1.74	4.05	.64
IN.	1.36	3.14	3.40	5.17	1.06	2.59	1.23	3.63	1.72	2.01	4.66	.71

CAL YR 1977 TOTAL 3118.45 MEAN 8.54 MAX 150 MIN .85 CFSM 1.60 IN 21.72
WTR YR 1978 TOTAL 4405.50 MEAN 12.1 MAX 220 MIN 1.6 CFSM 2.27 IN 30.68

01465798 POQUESSING CREEK AT GRANT AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°03'25", long 74°59'08", Philadelphia County, Hydrologic Unit 02040202, on right bank 600 ft (183 m) upstream from Delaware River Expressway and 3,000 ft (914 m) upstream from mouth in northeast Philadelphia.

DRAINAGE AREA.--21.4 mi² (55.4 km²).

PERIOD OF RECORD.--July 1965 to September 1970, July 1974 to current year.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 2.68 ft (0.817 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--9 years (1965-70, 1975-78), 30.5 ft³/s (0.864 m³/s), 19.35 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,660 ft³/s (132 m³/s) Aug. 27, 1967, gage height, 10.98 ft (3.347 m), from rating curve extended above 550 ft³/s (15.6 m³/s); minimum, 1.1 ft³/s (0.031 m³/s) Aug. 29, 1966, gage height, 2.43 ft (0.741 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Aug. 28, 1971 reached a stage of 13.05 ft (3.978 m), from floodmark, discharge, 7,380 ft³/s (209 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	0900	1,740	49.3	7.77	2.368	Jan. 26	0845	3,440	97.4	9.84	2.999
Nov. 8	0145	2,040	57.8	8.20	2.499	Mar. 26	2245	1,000	28.3	6.54	1.993
Dec. 1	0315	1,330	37.7	7.14	2.176	May 24	0930	2,160	61.2	8.37	2.551
Dec. 18	1545	1,360	38.5	7.19	2.192	June 7	1900	2,070	58.6	8.24	2.512
Dec. 21	0830	1,000	28.3	6.54	1.993	July 3	1845	1,480	41.9	7.40	2.256
Jan. 9	0345	1,560	44.2	7.52	2.292	Aug. 7	0215	*3,870	110	*10.27	3.130
Jan. 14	0145	890	25.2	6.32	1.926	Aug. 11	1715	2,690	76.2	9.04	2.755
Jan. 18	0145	975	27.6	6.49	1.978	Aug. 28	0900	1,930	54.7	8.04	2.451
Jan. 25	1715	990	28.0	6.52	1.987						

Minimum discharge, 5.8 ft³/s (0.164 m³/s) Mar. 5, result of freeze up; minimum gage height, 2.77 ft (0.844 m) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	8.0	365	26	31	16	21	13	25	9.9	44	35
2	18	8.9	37	27	27	15	18	13	19	9.4	11	16
3	7.5	20	26	22	26	16	18	13	18	426	68	13
4	6.9	18	22	21	24	18	23	33	18	93	60	11
5	6.6	11	126	21	25	15	32	53	17	19	52	11
6	8.9	11	56	22	22	15	18	19	16	15	45	12
7	7.5	626	28	23	27	15	24	14	258	13	672	11
8	6.9	496	22	64	26	14	17	18	64	12	24	11
9	232	43	25	453	25	15	15	169	37	11	18	10
10	24	30	19	31	23	18	15	34	18	12	25	9.9
11	11	23	18	25	21	60	16	18	17	11	188	8.9
12	9.4	18	18	21	21	84	22	16	16	11	100	18
13	8.5	16	18	40	21	90	15	15	56	9.9	49	22
14	46	14	145	270	24	192	13	247	17	43	21	9.4
15	182	14	81	41	22	94	12	39	15	75	18	12
16	19	14	27	26	20	64	12	92	14	33	18	9.4
17	30	70	23	52	21	70	12	59	14	65	17	8.0
18	14	27	472	382	20	41	12	73	15	18	14	12
19	15	16	105	49	19	36	88	28	15	12	13	19
20	30	14	50	35	19	30	98	22	14	12	12	9.9
21	12	15	396	37	19	27	25	21	45	11	11	8.0
22	9.9	19	59	27	18	47	19	17	54	12	11	8.0
23	8.5	196	40	26	16	24	17	17	15	11	11	10
24	8.5	31	35	26	18	20	16	731	13	11	9.9	6.9
25	8.5	30	68	359	26	18	16	60	12	9.4	10	6.9
26	12	190	36	1330	28	254	16	32	11	9.4	9.4	6.9
27	39	26	28	88	22	293	16	26	68	27	13	6.9
28	11	21	27	49	17	54	22	24	14	85	447	6.9
29	8.5	32	26	40	---	31	14	23	12	11	75	6.6
30	8.0	71	26	35	---	23	13	22	12	8.0	17	6.6
31	8.0	---	34	35	---	21	---	21	---	90	62	---
TOTAL	841.1	2128.9	2458	3703	627	1730	675	1982	939	1195.0	2145.3	342.2
MEAN	27.1	71.0	79.3	119	22.4	55.8	22.5	63.9	31.3	38.5	69.2	11.4
MAX	232	626	472	1330	31	293	98	731	258	426	672	35
MIN	6.6	8.0	18	21	16	14	12	13	11	8.0	9.4	6.6
CFSM	1.27	3.32	3.71	5.56	1.05	2.61	1.05	2.99	1.46	1.80	3.23	.53
IN.	1.46	3.70	4.27	6.44	1.09	3.01	1.17	3.45	1.63	2.08	3.73	.59

CAL YR 1977 TOTAL 13391.4 MEAN 36.7 MAX 740 MIN 2.0 CFSM 1.72 IN 23.28
WTR YR 1978 TOTAL 18766.5 MEAN 51.4 MAX 1330 MIN 6.6 CFSM 2.40 IN 32.62

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA

LOCATION.--Lat 40°01'57", long 74°59'46", Philadelphia County, Hydrologic Unit 02040202, water-quality recorder (40°02'05", 74°59'57") located on right bank in inactive building at Torresdale Filter Plant, 1.7 mi (2.7 km) downstream from Poquessing Creek.

DRAINAGE AREA.--7,781 mi^2 (20,200 km^2).

PERIOD OF RECORD.-- August 1949 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: June 1968 to current year.
WATER TEMPERATURES: October 1956 to September 1957, November 1960 to current year.
DISSOLVED OXYGEN: January 1961 to current year.

REMARKS.--Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-O.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 865 micromhos Jan. 10, 1977; minimum, 71 micromhos July 24, 1970.
pH: Maximum, 8.1 Dec. 30, 1970; minimum, 4.9 Apr. 5, 1969.
WATER TEMPERATURES: Maximum, 32.5°C July 21, 1977; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 14.5 mg/L Feb. 4-5, 1964; minimum, 0.0 mg/L on many days during 1962 and 1965.

EXTREMES FOR CURRENT YEAR.--
pH: Maximum, 7.6 on many days; minimum, 5.5 May 24, June 24, Sept. 5, 14, 15.
WATER TEMPERATURES: Maximum, 31.0°C July 24; minimum, 1.0°C on many days during January and February.
DISSOLVED OXYGEN: Maximum, 13.7 mg/L Dec. 10; minimum, 2.3 mg/L July 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT 06...	1430	110	6.9	17.0	8.6	--	42	21	12	3.0
NOV 03...	1310	148	6.9	15.0	8.6	--	45	20	12	3.7
DEC 01...	1600	114	6.9	7.0	11.2	--	56	24	15	4.4
APR 25...	0830	158	7.4	12.5	9.6	25	53	20	14	4.3
JUN 05...	1300	178	6.9	25.5	6.6	20	55	17	15	4.3
JUL 12...	1245	233	6.8	26.5	3.3	23	75	29	19	6.7
AUG 16...	1325	220	7.0	28.5	6.9	30	73	32	19	6.1
SEP 26...	1315	232	7.2	22.5	7.2	11	98	54	24	9.2

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 06...	5.2	20	.3	1.5	26	--	21	5.2	19	6.5
NOV 03...	7.2	25	.5	1.7	31	--	25	6.2	22	9.5
DEC 01...	7.5	22	.4	1.9	38	--	31	7.7	25	9.9
APR 25...	7.8	24	.5	1.6	40	0	33	2.5	22	11
JUN 05...	7.5	22	.4	1.5	46	0	38	9.3	22	9.6
JUL 12...	11	24	.6	2.3	56	0	46	14	27	15
AUG 16...	9.5	21	.5	3.3	50	0	41	8.0	28	13
SEP 26...	14	23	.6	2.9	53	0	43	5.4	37	20

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT										
06...	68	--	--	--	--	--	--	--	--	--
NOV										
03...	160	--	--	--	--	--	--	--	--	--
DEC										
01...	97	--	--	--	--	--	--	--	--	--
APR										
25...	98	.82	.02	.84	.57	.73	1.3	2.1	.18	.04
JUN										
05...	106	--	--	.82	--	.57	--	1.7	.19	.06
JUL										
12...	143	1.8	.00	1.8	.02	.97	.99	2.8	.18	.06
AUG										
16...	226	1.4	.01	1.4	.23	.97	1.2	2.6	.22	.10
SEP										
26...	168	2.1	.04	2.1	.09	.79	.88	3.0	.16	.06

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
06...	--	--	--	--	--	--	--	--	--
NOV									
03...	--	--	--	--	--	--	--	--	--
DEC									
01...	--	--	--	--	--	--	--	--	--
APR									
25...	--	--	--	--	--	--	--	--	7.5
JUN									
05...	--	--	--	--	--	--	--	--	3.5
JUL									
12...	1	0	10	55	9	.5	24	70	5.7
AUG									
16...	1	2	10	75	45	<.5	65	100	5.3
SEP									
26...	--	--	--	--	--	--	--	--	7.8

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	189	86	99	204	135	145	310	108	129			
2	296	93	112	205	140	151	206	108	120			
3	155	95	106	230	142	159	211	106	123			
4	155	99	111	289	149	169	---	---	---			
5	205	110	121	225	153	165	---	---	---			
6	160	107	121	216	157	165	---	---	---			
7	152	97	111	443	157	186	---	---	---			
8	162	94	104	222	142	172	---	---	---			
9	221	96	114	271	172	190	---	---	---			
10	132	102	109	363	163	186	---	---	---			
11	132	106	115	298	145	168	---	---	---			
12	146	117	126	220	131	149	---	---	---			
13	152	117	127	245	117	136	---	---	---			
14	137	106	117	213	107	133	---	---	---			
15	179	101	113	---	---	---	---	---	---			
16	122	97	105	---	---	---	---	---	---			
17	200	102	111	---	---	---	---	---	---			
18	162	104	117	---	---	---	---	---	---			
19	119	90	100	---	---	---	---	---	---			
20	---	---	---	---	---	---	---	---	---			
21	---	---	---	157	98	112	---	---	---			
22	---	---	---	164	103	115	---	---	---			
23	---	---	---	159	101	117	---	---	---			
24	---	---	---	139	102	112	---	---	---			
25	---	---	---	175	107	116	---	---	---			
26	167	97	133	189	106	119	---	---	---			
27	196	102	133	165	111	124	---	---	---			
28	170	111	132	159	115	124	---	---	---			
29	165	116	124	171	115	127	---	---	---			
30	208	120	132	217	116	138	---	---	---			
31	250	124	139	---	---	---	---	---	---			
MONTH	296	86	117	443	98	145	310	106	124			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	312	215	232	263	107	143	204	166	175
2	---	---	---	303	214	232	161	104	118	223	170	180
3	---	---	---	296	214	228	167	106	123	255	173	188
4	---	---	---	294	212	229	199	105	130	212	181	189
5	---	---	---	394	216	245	205	101	121	245	182	190
6	---	---	---	364	221	247	188	106	130	207	183	189
7	---	---	---	329	227	250	192	108	124	221	185	191
8	---	---	---	313	228	245	153	111	119	249	188	202
9	---	---	---	301	230	244	169	112	120	229	200	212
10	---	---	---	303	232	247	215	111	124	220	204	211
11	---	---	---	365	239	259	196	110	126	232	210	216
12	---	---	---	446	242	265	187	113	125	248	192	209
13	---	---	---	381	205	248	204	116	133	249	187	202
14	---	---	---	260	200	221	162	121	130	237	142	185
15	---	---	---	204	173	189	178	123	135	180	161	172
16	---	---	---	262	157	180	256	122	136	242	158	168
17	---	---	---	336	149	183	180	120	135	189	145	160
18	---	---	---	301	144	171	187	120	130	231	139	159
19	---	---	---	306	144	168	292	121	139	168	130	137
20	---	---	---	203	147	161	241	127	146	171	124	135
21	---	---	---	246	144	161	171	133	145	159	120	138
22	301	183	201	269	147	165	173	142	149	163	120	150
23	342	188	208	262	138	158	187	146	156	159	119	130
24	279	192	206	171	122	137	201	153	163	159	120	133
25	291	194	207	159	105	125	180	154	161	154	126	133
26	300	198	213	234	101	117	191	150	159	188	128	140
27	322	206	227	164	104	123	179	151	158	183	139	152
28	298	208	229	156	108	121	186	158	164	244	146	159
29	---	---	---	252	105	135	199	145	168	244	146	158
30	---	---	---	176	114	148	210	165	172	192	148	157
31	---	---	---	241	105	141	---	---	---	222	150	162
MONTH	342	183	213	446	101	193	292	101	139	255	119	170

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	259	154	168	255	226	233	---	---	---	248	199	210
2	237	160	170	247	226	232	268	260	263	255	200	218
3	195	165	172	239	169	225	279	259	265	237	202	212
4	198	168	175	259	203	224	292	250	265	253	199	215
5	201	173	180	259	216	239	302	259	266	254	197	207
6	197	176	182	259	215	225	388	257	267	253	202	230
7	194	178	181	268	216	224	---	---	---	---	---	---
8	232	178	187	299	218	229	285	253	260	---	---	---
9	210	184	190	277	224	231	305	254	261	---	---	---
10	200	188	193	269	228	235	281	245	256	---	---	---
11	242	190	199	257	229	235	256	227	243	---	---	---
12	262	193	201	292	229	238	---	---	---	253	196	207
13	246	191	201	323	232	242	---	---	---	246	197	209
14	206	175	185	250	230	234	---	---	---	252	196	218
15	213	169	178	245	227	232	245	217	224	255	202	217
16	198	169	176	305	225	234	266	215	222	254	205	217
17	191	172	177	240	222	227	261	215	224	255	212	223
18	216	172	183	236	224	228	250	214	222	243	216	224
19	224	181	190	257	228	233	242	215	223	247	220	227
20	232	187	195	262	230	238	275	217	225	242	220	228
21	265	189	199	283	235	244	259	217	227	264	224	233
22	228	189	197	272	241	249	267	224	233	259	234	242
23	245	190	199	313	250	257	264	228	235	257	234	242
24	246	194	204	279	253	259	269	231	239	259	236	241
25	245	200	212	277	251	257	257	233	239	267	236	243
26	247	204	212	277	250	258	263	232	238	261	230	241
27	286	208	220	309	254	263	268	234	242	265	233	240
28	259	215	222	275	253	258	339	136	230	266	231	239
29	264	219	228	265	255	258	248	197	220	245	228	235
30	258	224	232	264	257	260	248	201	209	262	224	235
31	---	---	---	---	---	---	248	199	209	---	---	---
MONTH	286	154	194	323	169	240	388	136	239	267	196	226

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.9	6.6	6.7	7.0	6.8	6.9	7.4	6.8	7.0	7.5	7.0	7.2
2	7.0	6.6	6.6	7.0	6.8	6.9	7.4	6.8	7.0	7.6	7.0	7.4
3	6.9	6.6	6.7	7.0	6.8	6.9	7.4	6.9	7.0	7.6	7.1	7.4
4	6.9	6.7	6.8	7.0	6.8	6.9	7.4	6.8	7.0	7.6	7.1	7.4
5	7.1	6.8	6.9	7.0	6.8	6.9	7.1	6.9	7.0	7.6	7.1	7.4
6	7.0	6.8	6.9	7.0	6.9	6.9	7.0	6.8	6.9	7.6	7.5	7.5
7	6.9	6.7	6.8	7.0	6.8	6.9	7.5	7.0	7.0	7.6	7.1	7.5
8	7.0	6.7	6.8	7.0	6.7	6.9	7.5	7.0	7.1	7.5	7.1	7.4
9	7.0	6.7	6.8	7.0	6.7	6.9	7.6	7.0	7.1	7.6	6.8	7.2
10	6.8	6.7	6.8	7.1	6.7	6.8	7.5	7.1	7.4	7.6	7.2	7.3
11	6.9	6.7	6.8	7.1	6.8	6.9	7.5	7.1	7.5	7.0	6.7	6.8
12	7.5	6.8	6.9	7.0	6.8	6.9	7.5	7.0	7.2	6.9	6.7	6.8
13	7.1	6.9	7.0	7.1	6.9	6.9	7.4	7.0	7.1	6.9	6.7	6.9
14	7.1	6.9	7.0	7.0	6.8	6.9	7.5	7.0	7.3	6.9	6.9	6.9
15	7.1	6.9	7.0	7.0	6.7	6.9	7.5	7.0	7.4	7.4	6.9	6.9
16	7.0	6.8	6.9	7.1	6.7	6.9	7.5	7.0	7.3	7.1	6.9	7.0
17	7.5	6.8	7.0	7.1	6.7	6.9	7.4	6.9	7.1	7.0	7.0	7.0
18	7.5	7.0	7.3	7.1	6.9	6.9	7.5	6.9	7.1	7.0	6.9	7.0
19	7.4	6.9	7.2	7.0	6.9	6.9	7.0	6.9	7.0	7.0	6.9	7.0
20	7.1	6.8	6.9	6.9	6.8	6.9	7.0	6.8	6.9	7.0	6.9	7.0
21	7.0	6.7	6.8	7.0	6.8	6.9	7.4	6.8	7.0	7.1	7.0	7.0
22	7.1	6.8	6.9	7.0	6.8	6.9	7.0	6.8	7.0	7.1	7.0	7.0
23	7.1	6.8	6.9	7.0	6.8	6.9	7.1	6.9	7.0	7.1	7.0	7.0
24	7.4	6.8	6.9	7.0	6.7	6.9	7.1	6.9	7.0	7.1	7.0	7.0
25	7.0	6.8	6.9	7.4	6.8	6.9	7.5	6.9	7.0	7.1	6.9	7.0
26	7.0	6.7	6.8	7.5	6.9	6.9	7.1	7.0	7.1	7.5	6.7	7.3
27	6.9	6.7	6.8	7.4	7.0	7.3	7.6	7.1	7.4	7.4	6.9	7.0
28	6.9	6.7	6.8	7.5	6.9	7.4	7.6	7.1	7.5	7.1	6.8	7.0
29	6.9	6.7	6.8	7.4	7.0	7.1	7.6	7.1	7.5	7.5	6.7	6.9
30	6.9	6.7	6.8	7.0	6.9	7.0	7.6	7.0	7.3	7.0	6.8	6.9
31	7.0	6.7	6.8	---	---	---	7.5	7.1	7.4	7.4	6.9	7.0
MONTH	7.5	6.6	6.9	7.5	6.7	6.9	7.6	6.8	7.2	7.6	6.7	7.1

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.1	6.9	7.0	7.6	7.2	7.5	7.5	6.7	6.8	7.5	7.0	7.1
2	7.0	6.9	7.0	7.6	7.2	7.4	6.9	6.7	6.8	7.5	6.9	7.1
3	7.0	6.9	7.0	7.6	7.2	7.3	7.4	6.8	6.9	7.5	7.0	7.1
4	7.1	7.0	7.0	7.6	7.2	7.3	7.0	6.7	6.9	7.6	7.0	7.3
5	7.1	6.9	7.0	7.3	7.2	7.2	6.9	6.7	6.8	7.5	7.0	7.2
6	7.1	7.0	7.1	7.6	7.2	7.2	6.9	6.7	6.8	7.5	6.9	7.1
7	7.1	7.1	7.1	7.3	7.2	7.3	6.9	6.8	6.9	7.1	7.0	7.0
8	7.1	7.0	7.1	7.3	7.2	7.3	6.9	6.8	6.9	7.1	6.9	7.0
9	7.5	6.9	7.1	7.3	7.2	7.2	7.0	6.8	6.9	7.1	6.9	7.0
10	7.6	7.1	7.2	7.6	7.1	7.2	7.0	6.9	6.9	7.0	6.9	7.0
11	7.6	7.1	7.2	7.6	7.2	7.2	7.5	6.8	6.9	7.0	6.9	7.0
12	7.6	7.1	7.2	7.3	7.1	7.2	7.4	6.9	7.0	7.4	6.9	7.0
13	7.6	7.1	7.3	7.5	7.0	7.3	7.5	6.9	7.0	7.5	6.9	7.0
14	7.6	7.0	7.3	7.5	7.0	7.3	7.5	6.9	7.1	7.0	6.7	6.9
15	7.6	7.0	7.5	7.4	6.8	7.1	7.6	7.0	7.3	7.0	6.8	6.9
16	7.6	7.1	7.5	7.4	6.9	7.0	7.5	7.0	7.3	6.9	6.8	6.9
17	7.6	7.4	7.5	7.0	6.8	6.9	7.6	6.9	7.2	6.9	6.8	6.8
18	7.6	7.1	7.5	7.0	6.8	6.9	7.6	7.0	7.2	6.9	6.7	6.8
19	7.6	7.1	7.5	7.4	6.9	7.0	7.1	6.9	7.0	6.8	6.6	6.7
20	7.6	7.2	7.5	7.0	6.9	6.9	7.0	6.8	7.0	6.8	6.6	6.7
21	7.6	7.4	7.5	7.5	6.9	7.1	7.1	7.0	7.0	6.7	6.6	6.7
22	7.6	7.2	7.5	7.4	7.0	7.1	7.4	7.0	7.0	6.8	6.6	6.7
23	7.6	7.1	7.5	7.0	7.0	7.0	7.5	6.9	7.1	6.8	6.6	6.7
24	7.6	7.2	7.5	7.0	6.9	7.0	7.5	7.0	7.2	6.7	6.5	6.7
25	7.6	7.1	7.5	7.0	6.9	7.0	7.5	7.0	7.4	6.7	6.6	6.6
26	7.6	7.1	7.5	7.0	6.7	6.9	7.6	7.1	7.5	6.7	6.6	6.6
27	7.6	7.2	7.4	6.9	6.7	6.8	7.6	7.4	7.5	6.8	6.6	6.7
28	7.6	7.1	7.5	6.9	6.7	6.8	7.4	7.0	7.3	6.8	6.7	6.7
29	---	---	---	6.9	6.6	6.8	7.4	6.9	7.2	6.9	6.7	6.7
30	---	---	---	6.9	6.7	6.8	7.5	6.9	7.1	6.9	6.7	6.7
31	---	---	---	6.9	6.6	6.8	---	---	---	7.0	6.7	6.8
MONTH	7.6	6.9	7.3	7.6	6.6	7.1	7.6	6.7	7.1	7.6	6.5	6.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.1	6.8	6.9	7.5	6.9	7.1	---	---	---	6.8	6.6	6.7
2	7.1	6.8	6.9	7.0	6.8	6.9	7.1	6.8	7.0	6.8	6.6	6.7
3	7.0	6.8	6.9	6.9	6.7	6.8	7.1	6.9	7.0	6.7	6.6	6.7
4	6.9	6.8	6.9	6.8	6.7	6.8	7.1	6.9	7.0	6.7	6.6	6.6
5	7.0	6.8	6.9	6.8	6.7	6.7	7.0	6.9	7.0	6.7	6.5	6.6
6	6.9	6.7	6.8	6.8	6.6	6.7	7.0	6.9	7.0	6.7	6.6	6.6
7	6.9	6.7	6.8	6.8	6.7	6.7	---	---	---	---	---	---
8	6.9	6.7	6.8	6.9	6.6	6.7	7.1	6.9	7.0	---	---	---
9	6.8	6.7	6.8	6.8	6.6	6.7	7.2	6.9	7.1	---	---	---
10	6.9	6.7	6.8	6.9	6.6	6.7	7.3	7.0	7.1	---	---	---
11	6.9	6.7	6.8	6.8	6.7	6.7	7.1	6.9	7.0	---	---	---
12	7.0	6.8	6.9	7.1	6.7	6.8	---	---	---	6.9	6.6	6.7
13	7.0	6.8	6.9	7.3	6.7	6.8	---	---	---	6.9	6.6	6.7
14	6.9	6.8	6.8	6.9	6.8	6.8	---	---	---	6.9	6.5	6.7
15	6.9	6.7	6.8	6.9	6.8	6.8	7.5	6.9	7.2	6.8	6.5	6.7
16	7.0	6.8	6.9	6.9	6.7	6.8	7.2	6.9	7.0	6.8	6.6	6.7
17	6.9	6.8	6.8	6.9	6.6	6.8	7.5	6.8	7.1	6.9	6.6	6.8
18	7.0	6.8	6.8	6.9	6.7	6.8	7.5	6.8	7.4	6.8	6.6	6.7
19	6.9	6.7	6.8	6.9	6.7	6.8	7.5	6.8	7.1	6.9	6.6	6.8
20	6.9	6.7	6.8	7.1	6.7	6.9	7.6	6.9	7.1	6.9	6.6	6.8
21	6.9	6.7	6.8	7.3	6.9	7.0	7.6	6.9	7.2	6.9	6.7	6.8
22	6.7	6.6	6.7	7.4	6.9	7.1	7.6	6.9	7.2	6.9	6.8	6.8
23	6.7	6.6	6.7	7.5	6.9	7.1	7.5	7.0	7.3	7.0	6.7	6.9
24	6.7	6.5	6.6	7.4	7.0	7.1	7.5	7.0	7.2	6.9	6.8	6.9
25	6.8	6.6	6.7	7.2	6.9	7.1	7.6	6.9	7.2	---	---	---
26	7.0	6.6	6.8	7.5	6.9	7.0	7.6	7.1	7.4	---	---	---
27	7.0	6.7	6.8	7.4	6.9	7.0	7.6	7.1	7.4	---	---	---
28	7.1	6.7	6.9	7.4	6.9	7.0	7.6	6.7	7.3	---	---	---
29	7.3	6.9	7.0	7.4	6.9	7.0	7.6	6.7	7.1	7.2	6.9	7.0
30	7.6	6.9	7.1	7.4	6.9	7.0	6.8	6.6	6.7	7.2	6.8	7.0
31	---	---	---	---	---	---	6.7	6.6	6.7	---	---	---
MONTH	7.6	6.5	6.8	7.5	6.6	6.9	7.6	6.6	7.1	7.2	5.5	6.8

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	17.5	17.5	14.5	13.0	14.0	8.5	6.5	7.0	3.0	1.5	2.0
2	19.5	18.0	18.5	15.0	14.0	14.5	9.0	6.0	6.5	3.5	1.5	2.0
3	19.0	18.0	18.0	15.5	14.5	15.0	8.0	6.0	7.0	2.5	1.5	2.0
4	18.5	17.0	18.0	16.5	15.0	15.5	7.5	6.5	6.5	2.5	1.5	2.0
5	18.5	17.0	18.0	16.0	15.0	15.5	8.0	6.0	6.0	2.5	1.5	2.0
6	18.0	17.0	17.5	15.5	15.0	15.0	8.0	5.5	6.0	3.0	2.0	2.5
7	17.0	16.0	17.0	16.0	15.0	15.0	5.5	3.0	5.0	3.5	2.5	3.0
8	17.0	16.0	16.5	15.5	14.0	15.0	4.5	3.0	4.0	7.0	2.5	3.5
9	16.5	16.5	16.5	16.0	15.0	15.5	4.5	2.5	4.0	5.5	4.0	4.5
10	16.5	15.5	16.0	16.5	15.0	15.5	3.5	1.5	3.0	4.5	2.0	3.5
11	16.5	15.5	16.0	15.0	13.0	14.0	2.5	1.5	2.5	2.0	1.0	1.5
12	16.0	15.0	15.5	13.5	11.5	13.5	2.0	1.5	2.0	1.5	1.0	1.0
13	15.0	14.5	15.0	12.5	10.0	11.5	2.0	1.5	2.0	1.5	1.0	1.0
14	14.5	14.0	14.0	10.5	9.5	10.0	2.5	1.5	2.0	2.5	1.5	1.5
15	14.5	12.0	13.5	10.0	9.0	9.5	8.0	2.5	3.5	2.0	1.5	1.5
16	14.5	13.0	14.0	11.5	8.5	9.0	5.5	2.5	3.5	1.5	1.0	1.5
17	14.0	12.0	13.0	12.5	9.0	9.5	7.0	4.0	4.5	1.5	1.0	1.5
18	13.5	11.5	12.5	10.5	8.5	9.0	5.0	3.5	4.0	3.0	1.5	2.0
19	12.5	11.5	12.0	9.5	8.0	9.0	4.5	4.0	4.0	2.0	1.5	1.5
20	12.0	11.0	11.5	9.5	8.5	9.0	5.0	4.0	4.0	1.5	1.0	1.0
21	11.5	10.5	11.0	10.0	9.0	9.5	8.5	4.5	6.0	1.5	1.0	1.5
22	12.0	11.0	11.5	9.5	9.5	9.5	7.5	5.5	5.5	1.5	1.0	1.5
23	12.5	11.5	12.0	9.5	8.5	9.0	7.5	5.0	5.5	1.5	1.0	1.5
24	12.5	12.0	12.0	9.5	9.0	9.0	6.0	5.0	5.0	1.5	1.0	1.5
25	13.0	12.0	12.5	9.0	9.0	9.0	7.5	5.0	5.5	2.5	1.5	1.5
26	13.0	12.5	12.5	9.0	6.5	8.5	6.5	4.0	4.5	3.0	2.0	2.5
27	14.0	12.5	13.0	8.0	6.0	7.5	4.0	2.5	4.0	2.5	1.5	2.0
28	14.5	13.0	13.5	8.0	6.5	7.5	3.5	2.5	3.5	2.5	1.0	1.0
29	14.0	13.5	13.5	7.5	6.5	7.0	3.0	1.5	2.5	2.0	1.0	1.0
30	14.5	13.0	13.5	7.0	6.5	6.5	2.5	1.5	2.0	3.0	1.0	1.5
31	14.5	13.0	13.5	---	---	---	3.5	2.0	2.5	2.0	1.0	1.5
MONTH	19.5	10.5	14.5	16.5	6.0	11.5	9.0	1.5	4.5	7.0	1.0	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.0	1.5	4.5	3.5	3.5	13.5	7.5	9.0	---	---	---
2	1.5	1.0	1.5	5.5	3.0	3.5	9.5	8.5	9.0	---	---	---
3	2.0	1.0	1.5	4.0	3.0	3.5	9.0	8.5	8.5	---	---	---
4	1.5	1.0	1.5	4.0	2.0	3.5	9.5	8.0	8.5	---	---	---
5	1.5	1.0	1.0	4.0	2.0	3.5	10.0	8.0	8.5	14.5	13.0	14.5
6	1.0	1.0	1.0	4.0	2.5	3.5	9.5	7.5	8.0	14.5	14.0	14.5
7	1.5	1.0	1.0	4.0	3.5	3.5	9.5	8.0	8.5	15.5	14.5	15.0
8	2.0	1.0	1.5	4.0	3.0	3.5	12.5	8.5	9.0	15.5	14.5	15.0
9	2.5	1.0	1.5	4.0	3.5	3.5	12.5	8.5	9.0	16.0	15.5	15.5
10	2.5	1.0	1.5	4.0	4.0	4.0	13.0	9.0	10.0	16.5	15.5	15.5
11	3.0	1.0	1.5	6.0	3.5	4.0	13.0	9.5	10.5	18.0	15.0	16.0
12	3.0	1.0	2.0	6.5	4.0	4.5	12.5	9.5	11.5	18.0	15.5	16.5
13	2.5	1.5	2.0	7.0	4.0	5.0	14.0	10.5	11.5	17.5	16.0	16.5
14	2.5	1.5	2.0	---	---	---	12.5	11.0	11.5	17.0	16.0	16.5
15	4.0	1.5	2.5	---	---	---	13.0	11.0	12.0	17.0	16.0	16.5
16	3.0	2.0	2.5	---	---	---	13.0	11.0	12.0	17.0	15.0	16.0
17	3.5	2.5	3.0	---	---	---	12.0	11.0	12.0	17.5	14.5	15.5
18	3.5	3.0	3.0	---	---	---	12.5	11.0	12.0	15.5	14.5	15.0
19	3.5	2.5	3.0	---	---	---	12.0	11.5	11.5	17.5	14.5	15.5
20	3.5	2.5	3.0	---	---	---	12.5	11.0	11.5	18.0	15.0	16.0
21	4.0	2.5	3.5	---	---	---	13.0	11.0	11.5	18.0	16.5	17.0
22	3.5	2.5	3.5	9.0	7.5	8.0	12.0	11.0	11.5	19.5	17.0	18.0
23	4.5	2.5	3.5	9.5	7.5	8.5	13.0	11.0	12.0	20.0	18.5	19.0
24	4.0	2.5	3.5	9.5	8.0	8.5	14.0	12.0	12.5	19.0	16.0	18.5
25	4.5	3.0	3.5	8.0	6.5	7.0	14.5	12.0	13.0	19.0	17.0	18.5
26	4.5	3.5	4.0	7.0	6.0	6.0	13.5	12.5	13.0	19.0	17.5	18.5
27	5.0	3.5	4.0	9.0	6.0	6.5	12.5	12.5	12.5	19.0	18.0	18.5
28	4.5	3.0	3.5	9.0	6.0	6.5	---	---	---	20.0	18.5	19.0
29	---	---	---	12.5	6.5	7.5	---	---	---	22.0	19.5	20.0
30	---	---	---	10.0	6.5	7.5	---	---	---	22.5	20.0	21.0
31	---	---	---	12.5	7.5	8.0	---	---	---	23.0	21.5	22.0
MONTH	5.0	1.0	2.5	12.5	2.0	5.5	14.5	7.5	10.5	23.0	13.0	17.0

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	22.5	23.0	27.5	26.5	27.0	---	---	---	27.0	25.5	27.0
2	25.5	23.5	24.5	27.0	26.0	27.0	28.0	27.5	27.5	28.0	26.0	26.5
3	25.5	24.5	25.0	26.5	21.5	26.0	28.5	27.5	28.0	27.0	25.5	26.5
4	25.5	24.5	25.5	26.0	25.0	25.5	28.5	28.0	28.5	28.0	25.5	26.0
5	25.5	24.5	25.0	27.5	25.0	26.0	28.5	28.0	28.0	28.0	25.0	26.0
6	26.5	24.0	25.5	28.0	24.5	25.5	29.0	27.5	28.5	26.0	25.5	25.5
7	25.0	23.5	25.0	26.0	24.5	25.5	---	---	---	---	---	---
8	25.0	23.0	24.5	26.5	25.0	25.5	29.5	28.5	28.5	---	---	---
9	25.5	23.5	24.5	27.5	25.5	26.0	29.5	28.0	28.5	---	---	---
10	25.5	23.5	24.5	28.0	26.0	27.0	29.5	28.5	29.0	---	---	---
11	26.5	23.5	24.5	27.5	26.0	26.5	29.0	28.0	28.5	---	---	---
12	26.5	23.5	24.5	28.0	25.5	26.5	---	---	---	25.0	24.5	25.0
13	24.5	23.0	24.0	28.0	26.0	27.0	---	---	---	24.5	23.0	24.0
14	23.5	21.5	23.5	27.0	26.0	26.5	---	---	---	24.5	23.0	24.0
15	24.0	22.0	23.0	27.5	26.0	27.0	28.5	28.0	28.0	24.0	23.0	23.5
16	24.5	22.5	23.5	27.5	25.0	27.0	28.5	27.5	28.0	24.0	23.5	23.5
17	23.5	22.5	23.5	27.0	25.5	26.5	28.5	27.5	28.0	24.5	23.5	24.0
18	24.0	23.0	23.5	27.5	26.5	27.0	28.5	27.5	28.0	24.5	23.5	24.0
19	25.0	23.5	24.0	28.0	26.5	27.5	29.5	28.0	28.5	24.0	23.0	23.5
20	25.5	24.0	24.5	28.5	27.0	28.0	29.0	28.0	28.5	24.5	22.5	23.5
21	25.0	24.0	24.5	29.0	27.5	28.5	29.0	27.0	28.0	24.5	22.5	23.5
22	25.5	24.5	25.0	29.5	28.0	28.5	29.0	27.5	28.0	24.0	23.0	23.5
23	26.5	24.5	25.0	30.5	28.5	29.0	29.5	27.5	28.0	23.5	22.0	23.0
24	26.5	24.5	25.5	31.0	29.0	29.5	29.5	27.5	28.5	24.0	21.5	23.0
25	27.5	25.0	26.0	29.5	29.0	29.0	28.5	27.5	28.0	23.0	21.5	22.5
26	26.5	25.5	26.0	29.5	28.0	29.0	28.5	26.5	27.5	22.5	21.0	22.0
27	28.0	25.0	26.5	30.0	28.5	29.0	28.0	26.5	27.5	22.5	20.0	22.0
28	28.0	26.0	27.0	30.0	26.5	29.0	27.5	23.5	27.0	22.0	21.0	21.5
29	28.0	26.5	27.0	29.0	28.0	28.5	27.5	25.5	27.0	22.0	20.5	21.5
30	28.0	26.5	27.5	29.0	28.0	28.5	27.5	26.5	27.0	21.5	20.5	21.0
31	---	---	---	---	---	---	27.5	26.0	27.0	---	---	---
MONTH	28.0	21.5	25.0	31.0	21.5	27.5	29.5	23.5	28.0	28.0	20.0	24.0

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	7.7	8.0	9.3	8.9	9.0	11.8	10.8	11.4	13.4	12.6	13.2
2	8.0	7.3	7.8	9.1	8.7	8.9	11.9	10.7	11.4	13.3	12.6	13.1
3	8.8	7.4	7.8	8.9	8.4	8.7	11.3	10.2	10.9	13.1	12.7	13.0
4	8.6	7.6	8.0	9.2	8.1	8.7	11.2	10.3	10.6	13.0	12.8	13.0
5	9.1	8.0	8.4	9.2	8.1	8.6	10.9	10.3	10.6	13.3	12.8	12.9
6	8.8	8.1	8.5	8.9	8.5	8.7	11.9	11.7	11.8	12.9	12.6	12.8
7	8.6	7.8	8.3	9.2	7.9	9.0	11.9	11.7	11.8	12.9	12.4	12.7
8	8.5	7.4	8.0	9.6	8.3	8.9	11.9	11.6	11.7	12.9	12.1	12.7
9	8.9	7.3	7.9	9.2	7.8	8.6	12.8	11.6	11.9	12.7	12.1	12.5
10	8.0	7.7	7.8	9.2	7.7	8.4	13.7	11.2	12.5	13.2	12.0	12.3
11	8.2	7.5	7.9	9.1	8.0	8.7	12.9	12.6	12.8	13.1	12.6	12.9
12	9.2	7.8	8.1	9.5	8.8	9.1	12.9	12.6	12.8	13.3	13.1	13.2
13	8.6	8.0	8.2	11.1	9.1	9.6	12.9	12.6	12.8	13.4	12.9	13.3
14	8.8	8.0	8.4	11.0	9.9	10.4	12.9	12.6	12.8	13.3	12.8	13.2
15	9.8	8.4	8.8	11.2	10.5	10.8	13.0	10.9	12.6	13.2	12.6	13.1
16	8.9	8.5	8.7	11.3	10.8	11.1	13.1	12.3	12.7	13.1	13.0	13.1
17	9.4	8.6	9.0	11.3	9.3	10.8	12.5	11.8	12.2	13.2	12.9	13.1
18	9.6	9.2	9.3	11.0	9.7	10.8	12.9	12.2	12.5	13.3	12.9	13.1
19	9.8	9.3	9.5	10.9	10.4	10.7	12.9	12.5	12.7	13.3	12.7	13.2
20	10.8	9.6	9.8	11.2	10.1	10.4	12.9	12.4	12.7	13.2	13.0	13.1
21	10.9	9.6	10.3	11.2	10.0	10.3	12.7	11.6	12.3	13.1	12.9	13.0
22	10.9	9.7	10.2	11.2	10.0	10.3	12.4	11.8	12.1	12.9	12.7	12.9
23	9.9	9.3	9.8	11.3	10.1	10.5	12.8	11.9	12.1	12.9	12.8	12.8
24	9.9	8.7	9.7	10.8	10.3	10.6	12.9	11.9	12.2	12.9	12.5	12.8
25	---	---	---	10.8	10.4	10.6	12.9	11.5	12.3	12.8	12.4	12.7
26	10.1	9.6	9.9	11.1	10.4	10.6	12.5	11.4	12.3	12.9	12.5	12.7
27	10.0	9.4	9.7	11.5	10.7	10.9	12.8	12.2	12.5	12.9	12.4	12.7
28	9.7	9.2	9.6	11.2	10.7	10.9	12.7	12.3	12.5	13.0	12.7	12.9
29	9.6	9.3	9.5	11.1	10.7	10.9	13.2	12.5	12.8	13.1	12.6	13.0
30	9.5	8.9	9.3	11.5	10.8	11.1	13.4	12.9	13.1	13.2	12.7	13.1
31	9.3	8.9	9.1	---	---	---	13.4	13.0	13.3	13.2	12.7	13.1
MONTH	10.9	7.3	8.8	11.5	7.7	9.9	13.7	10.2	12.2	13.4	12.0	12.9

01467030 DELAWARE RIVER AT TORRESDALE INTAKE AT PHILADELPHIA, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.2	12.9	13.1	11.7	11.3	11.5	11.6	10.5	11.3	9.2	8.8	8.9
2	13.2	12.9	13.0	11.8	11.3	11.4	11.4	10.7	11.3	9.6	8.5	8.9
3	13.2	12.8	13.0	11.6	11.1	11.3	11.3	10.7	11.1	9.7	8.3	8.8
4	13.1	12.8	13.0	11.6	11.1	11.3	11.4	10.9	11.2	9.2	8.4	8.8
5	13.1	12.6	13.0	11.5	10.9	11.2	11.7	10.4	11.4	8.9	8.2	8.6
6	13.0	12.9	12.9	11.7	11.1	11.3	11.7	10.9	11.5	8.6	7.7	8.3
7	13.0	12.8	12.9	11.6	11.1	11.4	11.6	10.6	11.4	8.6	7.8	8.1
8	12.9	12.6	12.8	11.5	10.9	11.3	11.4	10.8	11.3	8.4	7.6	8.0
9	12.8	12.4	12.8	11.5	11.0	11.2	11.3	10.8	11.1	8.6	7.5	7.9
10	12.7	12.4	12.6	11.3	10.9	11.1	11.1	10.7	11.0	7.6	7.1	7.4
11	12.7	12.5	12.5	11.3	10.7	11.0	11.1	10.5	10.9	8.1	7.0	7.6
12	12.6	12.4	12.5	11.4	10.8	11.0	11.0	10.6	10.9	8.2	7.4	7.9
13	13.2	12.4	12.5	11.3	9.4	10.9	11.1	9.8	10.7	9.0	7.4	7.9
14	13.2	12.2	12.4	11.2	10.8	11.0	11.2	10.3	10.6	8.7	7.6	8.1
15	13.2	12.2	12.4	11.3	10.8	11.0	11.1	10.0	10.3	9.0	7.7	8.6
16	13.1	12.1	12.3	11.3	10.8	11.0	11.2	9.8	10.2	9.1	7.8	8.2
17	12.8	11.9	12.2	11.6	10.7	11.0	10.8	9.8	10.1	9.2	7.7	8.5
18	12.1	11.8	11.9	11.5	11.0	11.2	10.9	10.0	10.4	9.1	8.7	8.9
19	12.0	11.7	11.9	11.8	11.0	11.6	11.1	9.7	10.3	9.2	8.8	9.0
20	12.0	11.7	11.8	11.9	11.3	11.6	10.4	9.3	10.1	9.3	8.6	9.0
21	11.9	11.6	11.8	11.8	10.7	11.6	11.1	9.7	10.5	9.1	8.4	8.8
22	11.8	11.5	11.7	11.7	10.7	11.3	10.9	9.6	10.0	9.1	8.4	8.6
23	11.9	11.6	11.7	11.4	10.7	11.1	9.8	9.3	9.6	9.0	8.0	8.3
24	11.8	11.5	11.7	11.2	10.7	11.1	9.6	9.2	9.4	9.1	7.6	8.1
25	11.8	11.5	11.6	11.6	10.9	11.4	9.8	9.1	9.5	8.9	7.7	8.0
26	11.7	11.4	11.5	11.8	11.3	11.6	9.8	9.2	9.6	8.0	7.4	7.7
27	11.7	11.4	11.6	11.9	11.2	11.7	9.8	9.2	9.5	8.0	7.4	7.8
28	11.7	11.3	11.5	11.8	11.2	11.7	9.8	9.4	9.5	8.8	7.3	7.8
29	---	---	---	11.7	10.5	11.6	9.6	9.1	9.4	7.9	7.4	7.7
30	---	---	---	11.7	10.9	11.4	9.4	8.9	9.1	9.0	7.3	7.9
31	---	---	---	11.5	11.0	11.4	---	---	---	9.1	7.3	7.9
MONTH	13.2	11.3	12.3	11.9	9.4	11.3	11.7	8.9	10.4	9.7	7.0	8.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.1	7.3	8.0	7.3	5.4	6.6	---	---	---	4.4	3.5	4.1
2	8.9	7.1	8.0	6.9	5.2	6.3	5.6	4.7	5.2	5.4	3.3	4.6
3	7.8	6.7	7.4	7.6	4.6	5.8	6.2	4.0	5.2	5.7	3.8	4.6
4	7.0	6.2	6.7	5.8	4.1	4.6	5.9	4.2	5.1	6.0	3.6	4.6
5	7.0	5.7	6.3	5.0	3.2	3.9	6.0	3.9	5.0	6.4	3.2	4.7
6	6.5	5.2	6.0	4.9	3.4	4.0	6.0	3.8	4.9	5.4	3.5	4.6
7	6.3	4.6	5.6	5.3	3.7	4.1	---	---	---	---	---	---
8	6.5	4.7	5.6	5.3	3.4	3.8	6.8	5.2	5.9	---	---	---
9	6.3	4.7	5.4	5.0	2.9	3.5	7.5	4.9	6.0	---	---	---
10	6.1	4.6	5.5	4.1	2.6	3.1	8.0	5.5	6.5	---	---	---
11	7.0	4.8	5.7	3.7	2.3	2.9	7.0	4.6	6.1	---	---	---
12	7.1	5.3	6.2	5.4	2.5	3.1	---	---	---	6.8	4.6	5.9
13	7.1	5.7	6.3	5.1	2.8	3.6	---	---	---	7.1	4.2	5.9
14	7.0	5.8	6.4	4.9	3.2	3.8	---	---	---	7.0	3.3	5.6
15	7.4	5.6	6.6	4.5	2.6	3.6	7.5	6.0	6.9	6.6	3.4	5.6
16	7.6	5.4	6.8	5.7	3.1	4.2	7.9	5.4	6.8	6.6	3.9	5.6
17	7.0	5.6	6.5	5.1	3.9	4.4	8.9	4.9	7.0	6.6	4.4	5.7
18	7.0	5.5	6.2	5.3	3.2	4.4	9.2	5.2	7.4	7.1	4.1	5.6
19	6.7	5.1	6.0	5.8	3.2	4.7	9.2	5.3	7.5	6.5	4.2	5.6
20	6.7	4.6	5.9	6.6	3.5	5.1	9.1	5.5	7.5	7.1	4.1	5.6
21	7.1	3.7	5.5	7.0	3.9	5.6	9.4	5.6	7.4	7.1	5.1	6.0
22	6.3	3.8	5.4	8.4	4.7	6.3	9.0	5.0	7.1	7.2	5.4	6.1
23	6.2	3.3	5.1	8.0	4.8	6.4	8.6	5.5	7.2	7.1	5.1	6.2
24	6.0	3.5	5.2	8.1	4.9	6.3	8.5	4.5	6.9	7.2	5.5	6.4
25	7.1	4.1	5.2	6.9	4.2	5.8	5.2	2.4	4.4	7.7	5.8	6.8
26	6.7	4.5	5.5	6.8	3.5	5.1	5.0	3.1	4.0	8.8	4.0	6.9
27	7.0	4.4	5.7	6.6	3.8	4.9	5.1	3.0	4.1	9.0	6.5	7.3
28	7.3	4.8	5.8	5.6	3.6	4.8	6.7	2.7	5.2	9.0	5.4	7.3
29	9.1	5.2	6.5	5.7	3.3	4.6	6.9	5.3	6.0	9.1	6.8	7.8
30	8.2	5.6	6.7	5.3	3.7	4.6	5.7	4.6	5.3	8.5	6.5	7.7
31	---	---	---	---	---	---	5.0	3.9	4.6	---	---	---
MONTH	9.1	3.3	6.1	8.4	2.3	4.7	9.4	2.4	6.0	9.1	3.2	5.9

01467041 PENNYPACK CREEK AT WELSH ROAD NEAR ABINGTON, PA

LOCATION.--Lat 40°07'14", long 75°04'21", Montgomery County, Hydrologic Unit 02040202, 300 ft (91 m) downstream of bridge on State Route 63, 0.3 mi (0.5 km) west of Huntingdon Valley, 0.7 mi (1.1 km) upstream from Meadow Brook, and 2.2 mi (3.5 km) east of Abington.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--November 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT									
05...	1000	9813	9813	500	8.2	13.0	6.8	--	118
NOV									
16...	0930	9813	9813	450	--	--	--	--	122
DEC									
12...	0945	9813	9813	430	--	--	--	--	116
JAN									
16...	0900	9813	9813	460	--	--	--	--	105
FEB									
21...	1400	9813	9813	470	--	--	--	--	112
MAR									
20...	1315	9813	9813	300	--	--	--	--	83
APR									
06...	--	9813	9813	340	--	--	--	--	96
MAY									
08...	1400	9813	9813	430	7.6	12.0	7.8	6.1	98
JUN									
19...	1300	9813	9813	410	--	--	--	--	108
JUL									
20...	1315	9813	9813	430	--	--	--	--	113
AUG									
15...	1300	9813	9813	440	--	--	--	--	106

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, TOTAL (MG/L AS F)
OCT									
05...	0	--	30	--	11	102	44	42	.1
NOV									
16...	--	50	--	.0	--	88	42	39	.1
DEC									
12...	--	31	--	10	--	80	38	37	.1
JAN									
16...	--	25	--	11	--	68	36	61	.1
FEB									
21...	--	27	--	12	--	82	38	52	--
MAR									
20...	--	23	--	6.8	--	60	30	33	--
APR									
06...	--	26	--	8.3	--	66	34	35	--
MAY									
08...	0	26	--	8.8	--	88	42	33	--
JUN									
19...	--	26	--	11	--	76	40	36	--
JUL									
20...	--	26	--	12	--	86	35	39	--
AUG									
15...	0	27	--	9.5	--	92	40	37	--

01467041 PENNYPACK CREEK AT WELSH ROAD NEAR ABINGTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT 05...	280	28	--	5.8	.71	2.5	4.0	500	.06
NOV 16...	240	8	248	3.7	.26	2.2	1.5	530	.06
DEC 12...	272	2	274	3.7	.16	1.8	2.4	300	--
JAN 16...	284	10	294	4.6	.14	3.3	.94	329	.19
FEB 21...	162	2	164	23	.19	2.4	1.9	320	--
MAR 20...	278	12	290	3.0	--	.99	.62	810	--
APR 06...	216	16	232	3.1	.15	1.5	--	310	--
MAY 08...	278	22	--	4.1	.44	3.9	1.9	290	--
JUN 19...	252	22	274	5.0	.34	1.7	1.5	800	--
JUL 20...	300	22	322	3.5	.63	2.9	2.3	490	--
AUG 15...	326	18	--	4.0	.67	4.2	2.1	600	--

01467042 PENNYPACK CREEK AT PINE ROAD, PHILADELPHIA, PA

LOCATION.--Lat 40°05'23", long 75°04'10", Philadelphia County, Hydrologic Unit 02040202, on right bank 20 ft (6 m) below Pine Road, 300 ft (91 m) upstream from Stream "A" at north city limits of Philadelphia.

DRAINAGE AREA.--37.9 mi² (98.2 km²).

PERIOD OF RECORD.--August 1964 to September 1970, July 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 80.41 ft (24.509 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 26, 1976, at site 35 ft (11 m) upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--10 years (Water years 1965-1970, 1975-78), 60.0 ft³/s (1.699 m³/s), 21.48 in/yr (546 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft³/s (107 m³/s) Dec. 21, 1973, gage height, 10.02 ft (3.054 m), from rating curve extended above 720 ft³/s (20.4 m³/s) on basis of step-backwater analysis; minimum, 5.2 ft³/s (0.15 m³/s) July 26, 27, 1966, gage height, 2.47 ft (0.753 m).

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of Aug. 28, 1971 reached a stage of 11.08 ft (3.377 m), from floodmark, discharge, 5,160 ft³/s (146 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	Unknown	1,600	45.3	Unknown		Mar. 14	1845	1,240	35.1	6.31	1.923
Nov. 8	Unknown	2,000	56.6	Unknown		Mar. 27	0030	1,250	35.4	6.33	1.929
Dec. 1	0430	1,180	33.4	6.17	1.881	May 14	1345	1,240	35.1	6.32	1.926
Dec. 18	1730	1,640	46.4	7.13	2.173	May 24	1315	2,320	65.7	8.28	2.523
Dec. 21	1100	1,490	42.2	6.82	2.079	July 3	1945	1,830	51.8	7.47	2.277
Jan. 9	0615	2,040	57.8	7.82	2.384	Aug. 11	1830	1,070	30.3	5.91	1.801
Jan. 18	0330	1,140	32.3	6.09	1.856	Aug. 28	1115	1,720	48.7	7.29	2.222
Jan. 26	1115	*3,460	98.0	*9.76	2.975						

Minimum discharge, 16 ft³/s (0.45 m³/s) Oct 3; minimum gage height, 2.98 ft (0.908 m) July 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	387	50	90	46	90	44	81	36	50	51
2	23	25	70	49	88	46	86	44	70	36	35	40
3	20	30	57	46	83	49	83	42	66	612	49	36
4	20	40	52	43	79	46	88	60	73	117	42	35
5	20	30	117	43	75	44	102	83	60	59	49	35
6	23	28	82	44	81	44	79	49	59	49	77	34
7	22	700	52	44	170	42	81	44	109	45	56	33
8	21	600	47	83	70	42	72	49	174	41	36	33
9	137	100	49	696	66	42	68	232	86	39	33	33
10	32	70	44	90	66	44	66	77	57	41	44	32
11	24	60	41	81	60	68	68	52	52	38	252	32
12	22	50	41	72	59	107	75	49	49	36	137	62
13	21	45	42	79	57	163	60	48	112	35	97	45
14	49	40	128	300	59	400	57	500	52	49	54	32
15	244	36	116	93	54	288	56	97	48	66	48	39
16	40	35	51	79	51	117	56	153	48	49	46	33
17	67	100	46	86	51	117	56	122	48	104	44	31
18	38	60	626	524	52	99	56	320	48	42	41	40
19	35	35	175	109	51	125	99	99	45	36	39	39
20	60	30	84	102	50	104	117	88	42	35	40	27
21	30	35	676	90	49	99	64	81	109	35	38	24
22	28	40	124	83	48	127	56	75	99	35	38	26
23	26	250	89	81	47	93	52	70	45	35	38	26
24	25	50	78	79	48	86	51	862	42	35	36	23
25	25	46	102	428	50	81	51	163	41	36	38	24
26	27	212	68	1740	60	372	49	107	41	35	36	23
27	60	50	58	252	51	616	48	95	68	60	36	23
28	40	47	55	137	49	150	48	93	39	98	524	23
29	30	52	52	114	---	112	45	88	41	44	174	23
30	27	80	51	104	---	99	44	86	39	35	42	23
31	25	---	56	97	---	95	---	93	---	80	70	---
TOTAL	1283	3001	3716	5918	1814	3963	2023	4065	1943	2093	2339	980
MEAN	41.4	100	120	191	64.8	128	67.4	131	64.8	67.5	75.5	32.7
MAX	244	700	676	1740	170	616	117	862	174	612	524	62
MIN	20	25	41	43	47	42	44	42	39	35	33	23
CFSM	1.09	2.64	3.17	5.04	1.71	3.38	1.78	3.46	1.71	1.78	1.99	.86
IN.	1.26	2.95	3.65	5.81	1.78	3.89	1.99	3.99	1.91	2.05	2.30	.96

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CAL YR 1977  TOTAL  20380   MEAN 55.8   MAX   770   MIN 12   CFSM 1.47   IN 20.00
WTR YR 1978  TOTAL  33138   MEAN 90.8   MAX  1740   MIN 20   CFSM 2.40   IN 32.53
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01467043 STREAM 'A' AT PHILADELPHIA, PA.

LOCATION.--Lat 40°05'27", long 75°03'50", Philadelphia County, Hydrologic Unit 02040202, on left bank 25 ft (8 m) upstream from concrete box culvert on Bloomfield Avenue and 600 ft (180 m) upstream from mouth in Philadelphia.

DRAINAGE AREA.--1.20 mi² (3.11 km²).

PERIOD OF RECORD.--Annual maximums, water years 1965-1977. Discontinued as a crest-stage partial-record station; established as a continuous-record station Dec. 4, 1976. December 1976 to September 1977.

GAGE.--Water-stage recorder. Datum of gage is 82.58 ft (25.170 m) National Geodetic Vertical Datum of 1929. Feb. 11, 1965 to Dec. 3, 1976, crest-stage gage at site 9 ft (3 m) downstream at same datum.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 663 ft³/s (18.8 m³/s) July 13, 1975, gage height, 18.03 ft (5.496 m); no flow part of many days in January and February 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.42 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	0650	77	2.18	11.85	3.612	June 27	0030	52	1.47	11.36	3.463
Nov. 7	2300	78	2.21	11.86	3.615	July 3	Unknown	Unknown		Unknown	
Jan. 26	0455	118	3.34	12.52	3.816	July 27	2220	73	2.07	11.79	3.594
May 24	Unknown	Unknown		Unknown		Aug. 3	0725	140	3.96	12.83	3.911
June 13	0700	73	2.07	11.79	3.594	Aug. 28	0610	*410	11.6	*15.75	4.801

Minimum discharge, 0.19 ft³/s (0.005 m³/s) Oct. 2, 3, 5, 7, 8; minimum gage height, 9.68 ft (2.950 m) July 24, 25, 27, 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.75	8.0	1.1	1.8	.75	2.1	1.3	1.8	.90	.50	.86
2	.25	.86	2.0	1.1	1.8	.66	1.9	1.2	1.6	.80	.39	.51
3	.19	1.8	1.3	1.1	1.6	1.2	2.1	1.2	1.6	22	3.4	.51
4	.25	.51	1.0	1.1	1.6	1.0	2.2	2.5	1.8	1.0	.86	.51
5	.25	.66	3.0	1.0	1.8	.66	1.9	2.2	1.6	.86	1.0	.45
6	.45	.51	1.5	1.0	2.1	.75	1.9	1.5	1.5	.86	1.5	.45
7	.19	22	1.0	1.0	2.8	.75	1.6	1.3	3.4	1.0	.60	.45
8	.25	5.2	.90	3.0	1.5	.66	1.5	2.1	2.5	1.0	.45	.51
9	3.8	1.3	.85	12	1.3	.66	1.5	6.5	1.8	.60	.40	.39
10	.45	1.2	.80	2.5	1.3	.75	1.5	1.8	1.2	.70	.50	.39
11	.25	1.2	.80	1.5	1.3	1.6	1.9	1.2	1.0	.29	5.0	.45
12	.22	1.0	.80	1.3	1.2	2.1	2.4	1.0	.86	.29	4.0	1.6
13	.22	.86	.90	2.0	1.2	2.4	2.8	.80	2.5	.50	1.0	.51
14	1.8	1.0	13	4.5	1.5	5.0	2.5	7.0	.86	1.5	.70	.39
15	3.0	1.0	1.5	2.5	1.2	2.5	2.8	1.5	.75	1.0	.55	.58
16	.66	1.0	1.0	1.5	1.2	2.4	2.4	5.0	.75	1.7	.51	.39
17	1.0	2.0	.80	3.0	1.0	2.5	2.1	2.0	.75	.50	.44	.39
18	.51	1.0	8.0	8.0	.86	1.8	1.9	6.0	.86	.34	.44	.58
19	.58	.90	4.0	2.0	.86	1.9	6.0	2.0	.75	.29	.42	1.3
20	1.3	.80	2.0	4.0	.86	1.6	4.0	1.5	.75	.29	.40	.51
21	.39	1.0	12	2.0	.86	1.8	1.9	1.3	3.0	.29	.39	.45
22	.34	1.5	3.0	1.7	.86	2.1	1.8	1.1	1.9	.25	.39	.51
23	.39	5.0	2.0	1.6	.86	1.6	1.6	1.0	.86	.25	.38	.39
24	.45	1.2	1.5	1.6	.86	1.6	1.6	20	.75	.25	.40	.34
25	.51	1.9	2.0	12	1.2	1.5	1.6	2.0	.66	.29	.41	.34
26	.66	3.6	1.5	24	1.0	9.2	1.5	1.8	.66	.25	.39	.29
27	1.3	1.2	1.3	3.0	.66	6.3	1.6	1.6	3.6	2.7	.41	.29
28	.45	1.0	1.2	2.7	.66	2.4	1.3	1.5	1.0	1.0	18	.34
29	.58	1.3	1.2	2.4	---	2.2	1.3	2.2	4.0	.29	.66	.34
30	.58	3.0	1.1	2.2	---	2.2	1.3	1.9	1.2	.25	.45	.29
31	.66	---	1.1	2.1	---	2.2	---	1.8	---	4.5	1.6	---
TOTAL	22.51	66.25	81.05	110.5	35.74	64.74	62.5	85.80	46.26	46.74	46.54	15.31
MEAN	.73	2.21	2.61	3.56	1.28	2.09	2.08	2.77	1.54	1.51	1.50	.51
MAX	3.8	22	13	24	2.8	9.2	6.0	20	4.0	22	18	1.6
MIN	.19	.51	.80	1.0	.66	.66	1.3	.80	.66	.25	.38	.29
CFSM	.61	1.84	2.18	2.97	1.07	1.74	1.73	2.31	1.28	1.26	1.25	.43
IN.	.70	2.05	2.51	3.42	1.11	2.01	1.94	2.66	1.43	1.45	1.44	.47

CAL YR 1977 TOTAL 474.29 MEAN 1.30 MAX 22 MIN .01 CFSM 1.08 IN 14.69
WTR YR 1978 TOTAL 683.94 MEAN 1.87 MAX 24 MIN .19 CFSM 1.56 IN 21.18

01467048 PENNYPACK CREEK AT LOWER RHAWN STREET BRIDGE, PHILADELPHIA, PA

LOCATION.--Lat 49°03'00", long 75°01'59", Philadelphia County, Hydrologic Unit 02040202, on left bank at downstream side of footbridge pier, 400 ft (122 m) downstream from Rhawn Street Bridge, 0.8 mi (1.3 km) upstream from Wooden Bridge Run, in Philadelphia.

DRAINAGE AREA.--49.8 mi² (129 km²).

PERIOD OF RECORD.--June 1965 to September 1970, July 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 21.27 ft (6.483 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for the periods of no gage-height record Jan. 21 to Feb. 21, which are fair.

AVERAGE DISCHARGE.--9 years (Water years 1966-1970, 1975-78), 80.3 ft³/s (2.274 m³/s), 21.89 in/yr (556 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft³/s (146 m³/s) Aug. 27, 1967, gage height, 10.54 ft (3.213 m); minimum, 6.0 ft³/s (0.17 m³/s) Oct. 11, 1966, gage height, 1.97 ft (0.600 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,250 ft³/s (35.4 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 7	1100	1,790	50.6	5.86	1.786	May 14	1500	1,260	35.7	5.10	1.554
Nov. 8	0415	2,330	66.0	6.54	1.993	May 24	1445	2,910	82.4	7.21	2.198
Dec. 1	0530	1,270	36.0	5.12	1.561	June 7	1630	1,930	54.7	6.04	1.841
Dec. 18	1845	1,820	51.5	5.90	1.798	July 3	2300	2,390	67.7	6.61	2.015
Dec. 21	1200	1,700	48.1	5.75	1.753	Aug. 6	2400	3,130	88.6	7.43	2.265
Jan. 9	0800	2,280	64.6	6.47	1.972	Aug 11	1600	1,310	37.1	5.19	1.582
Jan. 26	Unknown	*4,500	127	Unknown		Aug. 28	0630	2,240	63.4	6.42	1.957
Mar. 27	0300	1,290	36.5	5.15	1.570						

Minimum discharge, 20 ft³/s (0.57 m³/s) Sept. 30, gage height, 2.31 ft (0.704 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	31	566	86	130	51	113	48	153	36	109	86
2	42	31	141	86	140	48	99	49	117	35	43	46
3	29	39	102	77	160	51	96	49	109	651	137	40
4	26	45	86	70	120	52	105	74	125	534	102	38
5	26	34	189	70	110	48	153	137	109	105	113	34
6	28	34	181	72	120	46	90	61	90	74	149	34
7	27	875	90	72	250	48	99	49	265	65	248	32
8	25	1030	74	145	100	46	80	61	311	56	46	31
9	265	145	80	918	90	45	74	336	181	51	39	32
10	61	96	67	130	90	48	74	145	86	51	59	29
11	33	80	60	120	86	65	77	67	74	51	340	29
12	29	67	58	110	78	129	93	59	70	43	252	90
13	27	59	59	120	74	219	70	54	210	42	189	90
14	93	54	206	463	80	413	63	597	77	86	59	31
15	345	52	227	157	70	375	59	169	65	129	49	40
16	51	51	86	105	68	235	59	210	61	102	46	34
17	105	137	72	141	68	210	59	214	63	219	42	30
18	45	90	805	665	70	161	59	379	63	74	38	48
19	43	49	315	202	66	185	169	161	56	48	35	59
20	83	46	169	161	62	177	214	125	52	43	34	35
21	39	48	880	140	61	157	77	105	145	40	33	29
22	34	54	240	130	61	223	61	93	214	38	33	30
23	32	336	177	120	54	137	56	83	63	36	33	32
24	32	90	157	110	56	121	59	1270	51	34	32	26
25	32	80	214	500	59	102	54	336	46	35	32	26
26	36	328	141	2400	70	418	56	223	45	35	32	26
27	83	83	109	300	61	765	52	185	129	70	48	25
28	38	72	99	200	51	235	52	177	46	223	855	25
29	32	86	93	170	---	173	51	173	54	43	235	23
30	31	177	90	150	---	145	49	161	48	35	52	23
31	31	---	105	140	---	125	---	165	---	202	169	---
TOTAL	1845	4399	5938	8310	2505	5253	2472	6015	3178	3286	3683	1153
MEAN	59.5	147	192	268	89.5	169	82.4	194	106	106	119	38.4
MAX	345	1030	880	2400	250	765	214	1270	311	651	855	90
MIN	25	31	58	70	51	45	49	48	45	34	32	23
CFSM	1.20	2.95	3.86	5.38	1.80	3.39	1.66	3.90	2.13	2.13	2.39	.77
IN.	1.38	3.29	4.44	6.21	1.87	3.92	1.85	4.49	2.37	2.45	2.75	.86

CAL YR 1977 TOTAL 29894 MEAN 81.9 MAX 1030 MIN 15 CFSM 1.65 IN 22.33
WTR YR 1978 TOTAL 48037 MEAN 132 MAX 2400 MIN 23 CFSM 2.65 IN 35.88

01467049 WOODEN BRIDGE RUN AT GRANT AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°04'36", long 75°01'19", Philadelphia County, Hydrologic Unit 02040202, on left bank 20 ft (6 m) downstream from Grant Avenue Bridge in northeast Philadelphia.

DRAINAGE AREA.--1.06 mi² (2.75 km²).

PERIOD OF RECORD.--October 1973 to September 1978 (discontinued).

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Altitude of gage is 80 ft (24.4 m), from topographic map.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--5 years, 1.62 ft³/s (0.046 m³/s), 20.73 in/yr (527 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 818 ft³/s (23.2 m³/s) Aug. 1, 1977, gage height, 8.15 ft (2.484 m); minimum, 0.06 ft³/s (0.002 m³/s) Sept. 29, 1975, Feb. 7, 1977; minimum gage height, 1.59 ft (0.485 m) Mar. 31, Apr. 1, 13, 1977, caused by washout of control.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	2255	191	5.41	4.88	1.487	Aug. 3	2255	286	8.10	5.56	1.695
Jan. 9	0135	169	4.79	4.70	1.433	Aug. 6	2355	*718	20.3	*7.75	2.362
Jan. 26	0440	214	6.06	5.05	1.539	Aug. 11	1415	550	15.6	7.00	2.134
May 24	1110	272	7.70	5.47	1.667	Aug. 28	0605	413	11.7	6.30	1.920
June 7	1630	521	14.8	6.86	2.091						

Minimum discharge, .20 ft³/s (0.006 m³/s) July 20, 21, 22, 23, 27, gage height, 2.01 ft (0.613 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	.26	14	.38	.39	.37	.65	.54	1.3	.27	3.1	2.5
2	.35	.26	.49	.49	.38	.35	.54	.45	.49	.27	.28	.29
3	.26	1.6	.38	.35	.37	.40	.65	.45	.49	25	17	.29
4	.25	.30	.35	.35	.36	.50	1.4	5.1	.72	1.4	1.5	.29
5	.24	.45	8.3	.35	.35	.35	1.4	2.7	.54	.49	4.2	.25
6	.72	.32	.72	.41	.40	.35	.79	.79	.45	.54	14	.25
7	.25	42	.38	.38	.70	.40	.96	.45	12	.54	14	.27
8	.87	11	.35	6.5	.40	.35	.54	7.1	2.5	.54	.45	.79
9	17	.41	.59	20	.37	.40	.54	13	2.4	.54	.38	.59
10	.35	.38	.33	.45	.36	.65	.54	.59	.35	.59	1.4	.27
11	.29	.32	.32	.38	.35	4.6	1.5	.35	.33	.45	21	.29
12	.26	.30	.33	.38	.35	4.6	.65	.35	.33	.38	10	4.0
13	.25	.30	.33	6.8	.35	3.3	.45	.35	2.0	.32	.96	.65
14	5.3	.30	13	16	.50	8.0	.45	18	.33	2.7	.38	.24
15	9.4	.29	1.4	1.1	.40	1.2	.54	.79	.31	1.2	.33	.72
16	1.3	.29	.38	.79	.35	2.9	.45	9.0	.30	2.7	.30	.25
17	1.3	5.6	.35	7.7	.40	4.0	.54	1.4	.41	4.2	.29	.24
18	.30	.35	25	21	.35	.96	.45	3.3	.31	.28	.29	.45
19	.49	.29	3.3	.65	.35	.79	7.7	.59	.31	.25	.29	1.3
20	1.7	.28	1.2	.59	.35	.65	6.0	.54	.30	.24	.28	.25
21	.28	.28	20	.72	.35	1.3	.54	.49	6.8	.24	.28	.23
22	.26	.87	.59	.65	.34	1.3	.45	.45	1.2	.24	.28	.27
23	.26	13	.45	.54	.34	.59	.41	.45	.31	.24	.28	.27
24	.28	.59	.41	.54	.35	.54	.41	36	.30	.24	.28	.24
25	.26	4.0	3.5	27	.60	.54	.41	1.1	.30	.25	.28	.21
26	.41	8.7	.41	42	.55	20	.41	.59	.54	.24	.28	.23
27	2.0	.35	.38	1.1	.45	13	.41	.54	4.0	5.6	2.5	.23
28	.26	.38	.38	.72	.40	1.2	.41	.54	.30	2.4	22	.30
29	.26	2.4	.35	.49	---	.65	.41	.54	.96	.25	.32	.26
30	.26	6.8	.79	.45	---	.59	.41	.54	.29	.24	.28	.25
31	.26	---	.72	.40	---	.59	---	.54	---	8.0	5.6	---
TOTAL	48.07	102.67	99.48	159.66	11.21	75.42	31.01	107.62	41.17	60.84	122.81	16.67
MEAN	1.55	3.42	3.21	5.15	.40	2.43	1.03	3.47	1.37	1.96	3.96	.56
MAX	17	42	25	42	.70	20	7.7	36	12	25	22	4.0
MIN	.24	.26	.32	.35	.34	.35	.41	.35	.29	.24	.28	.21
CFSM	1.46	3.23	3.03	4.86	.38	2.29	.97	3.27	1.29	1.85	3.74	.53
IN.	1.69	3.60	3.49	5.60	.39	2.64	1.09	3.77	1.44	2.13	4.31	.58

CAL YR 1977 TOTAL 729.19 MEAN 2.00 MAX 45 MIN .08 CFSM 1.89 IN 25.57
WTR YR 1978 TOTAL 876.63 MEAN 2.40 MAX 42 MIN .21 CFSM 2.26 IN 30.74

01467050 WOODEN BRIDGE RUN AT PHILADELPHIA, PA

LOCATION.--Lat 40°03'19", long 75°01'22", Philadelphia County, Hydrologic Unit 02040203, on left bank 200 ft (61 m) upstream from Penn Central Railroad bridge, 600 ft (183 m) southeast of Holme Avenue and 1,500 ft (457 m) upstream from mouth in Philadelphia.

DRAINAGE AREA.--3.35 mi^2 (8.68 km^2).

PERIOD OF RECORD.--June 1965 to September 1970, October 1974 to current year.

REVISED RECORDS.--WDR PA-76-1: 1974.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 29.69 ft (9.050 m) National Geodetic Vertical Datum of 1929. Prior to July 6, 1966 water-stage recorder at site 300 ft (91 m) downstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--9 years (Water years 1966-70, 1975-78), 5.38 ft^3/s (0.152 m^3/s), 21.80 in/yr (554 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft^3/s (52.7 m^3/s) Aug. 27, 1967, gage height, 12.20 ft (3.719 m), from rating curve extended above 300 ft^3/s (8.5 m^3/s) on basis of flow through culvert at gage height 11.96 ft (3.645 m); minimum, 0.1 ft^3/s (0.003 m^3/s) Aug. 14, 15, 22, 1966, gage height, 1.44 ft (0.439 m) at former site, 3.28 ft (1.000 m) at present site.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft^3/s (8.50 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	0745	570	16.1	7.13	2.173	June 7	1745	702	19.9	7.63	2.326
Nov. 8	0030	680	19.3	7.55	2.301	July 3	1645	384	10.9	6.39	1.948
Dec. 1	0200	403	11.4	6.47	1.972	Aug. 7	0115	*1,410	39.9	*10.27	3.130
Jan. 9	0230	562	15.9	7.10	2.164	Aug. 11	1530	862	24.4	8.20	2.499
Jan. 18	0045	316	8.95	6.09	1.856	Aug. 12	1830	305	8.64	6.04	1.841
Jan. 26	0615	887	25.1	8.29	2.527	Aug. 28	0715	817	23.1	8.04	2.451
May 24	1215	436	12.3	6.61	2.015						

Minimum discharge, 0.60 ft^3/s (0.017 m^3/s) Sept. 26, gage height, 3.23 ft (0.985 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	1.2	71	2.5	3.1	2.5	3.0	1.9	2.8	1.4	7.7	6.7
2	2.1	1.3	4.3	2.8	2.9	2.4	2.0	2.1	2.3	1.4	3.0	2.2
3	1.2	3.7	3.1	2.7	2.8	2.4	2.2	2.1	2.3	88	16	1.8
4	1.1	1.9	2.7	2.7	2.5	3.1	3.3	8.3	2.4	9.4	7.5	1.5
5	1.4	1.4	17	2.7	2.5	2.4	4.7	8.4	2.4	2.3	9.0	1.7
6	2.1	1.3	6.0	2.9	2.7	2.5	2.4	2.8	2.1	1.7	19	1.8
7	1.1	126	2.9	2.7	4.8	2.5	3.5	1.8	53	1.5	147	1.8
8	1.2	102	2.5	11	2.9	2.4	2.3	2.4	8.7	1.4	2.7	1.9
9	32	4.3	3.1	91	2.7	2.5	2.1	32	7.3	1.4	2.3	1.6
10	3.2	3.4	2.2	3.7	2.5	3.2	2.0	5.1	2.5	1.4	3.6	1.3
11	1.8	2.7	2.1	2.8	2.4	16	2.3	2.3	2.3	1.5	74	1.6
12	1.4	2.3	2.1	2.7	2.4	15	4.1	1.9	2.2	1.3	24	8.4
13	1.3	2.1	2.3	11	2.5	13	3.0	1.8	6.3	1.2	4.8	4.0
14	9.3	2.1	29	36	3.1	25	2.9	57	2.1	7.8	2.6	1.4
15	17	2.1	9.0	5.0	3.1	8.3	3.0	4.3	1.9	6.7	2.2	2.1
16	2.8	2.1	3.2	3.4	2.7	8.2	3.1	21	1.7	7.8	2.4	1.4
17	5.3	12	2.7	11	2.9	10	3.2	9.8	1.9	10	1.9	1.3
18	2.0	3.1	56	52	2.5	5.2	3.0	10	1.9	1.8	1.8	1.7
19	2.2	2.1	14	5.2	2.5	4.3	18	3.8	2.4	1.5	1.7	3.8
20	4.5	1.8	5.4	4.1	2.5	3.2	13	2.6	2.3	1.4	1.4	1.9
21	1.6	2.2	45	4.1	2.5	3.2	3.0	2.3	20	1.4	1.4	1.7
22	1.5	3.2	5.6	3.4	2.3	4.8	2.2	2.1	3.5	1.3	1.5	2.1
23	1.2	39	3.8	3.2	2.3	3.0	2.0	2.0	2.7	1.0	1.5	2.1
24	1.2	4.1	3.4	3.1	2.4	2.5	1.9	133	2.2	1.1	1.6	1.7
25	1.3	5.4	9.0	50	4.0	2.5	1.9	6.8	1.7	1.3	1.8	1.5
26	1.9	26	3.4	185	4.1	65	2.1	3.5	1.8	1.6	1.6	1.9
27	4.5	3.1	2.8	8.1	3.2	40	2.3	3.1	13	15	6.3	1.9
28	1.5	2.9	2.7	4.5	2.7	3.5	2.2	2.8	1.9	12	86	2.2
29	1.2	5.4	2.5	3.8	---	3.0	2.0	2.7	2.1	1.5	2.9	2.1
30	1.2	15	2.8	3.5	---	2.7	1.8	2.5	1.8	1.0	2.2	1.8
31	1.2	---	4.3	3.2	---	2.2	---	2.7	---	38	13	---
TOTAL	115.0	385.2	325.9	529.8	79.5	266.5	104.5	344.9	161.5	226.1	454.4	68.9
MEAN	3.71	12.8	10.5	17.1	2.84	8.60	3.48	11.1	5.38	7.29	14.7	2.30
MAX	32	126	71	185	4.8	65	18	133	53	88	147	8.4
MIN	1.1	1.2	2.1	2.5	2.3	2.2	1.8	1.8	1.7	1.0	1.4	1.3
CFSM	1.11	3.82	3.13	5.10	.85	2.57	1.04	3.31	1.61	2.18	4.39	.69
IN.	1.28	4.28	3.62	5.88	.88	2.96	1.16	3.83	1.79	2.51	5.04	.76

CAL YR 1977 TOTAL 2316.24 MEAN 6.35 MAX 201 MIN .40 CFSM 1.90 IN 25.71
WTR YR 1978 TOTAL 3062.20 MEAN 8.39 MAX 185 MIN 1.0 CFSM 2.50 IN 33.99

01467053 PENNYPACK CREEK AT FRANKFORD AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°02'38", long 75°01'15", Philadelphia County, Hydrologic Unit 02040202, 210 ft (64 m) upstream from bridge on Frankford Avenue in Pennypack Park, Philadelphia.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--November 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT									
05...	1100	9813	9813	380	8.0	13.0	7.9	--	104
NOV									
17...	1100	9813	9813	340	--	--	--	--	98
DEC									
12...	1030	9813	9813	410	--	--	--	--	115
JAN									
16...	1100	9813	9813	410	--	--	--	--	96
FEB									
21...	1330	9813	9813	430	--	--	--	--	112
MAR									
20...	1230	9813	9813	250	--	--	--	--	74
APR									
06...	--	9813	9813	280	--	--	--	1.2	82
MAY									
08...	0930	9813	9813	370	--	--	--	2.3	94
JUN									
19...	1200	9813	9813	350	--	--	--	--	100
JUL									
20...	1315	9813	9813	330	--	--	--	--	94
AUG									
28...	1100	9813	9813	120	7.2	21.0	9.0	--	53

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT									
05...	0	--	27	--	9.0	74	30	38	.1
NOV									
17...	--	24	--	9.9	--	60	40	32	.1
DEC									
12...	--	26	--	13	--	68	36	45	.1
JAN									
16...	--	20	--	12	--	54	30	61	.1
FEB									
21...	--	25	--	13	--	66	42	52	--
MAR									
20...	--	19	--	7.1	--	48	24	29	--
APR									
06...	--	22	--	7.7	--	48	32	24	--
MAY									
08...	--	24	--	8.8	--	62	36	35	--
JUN									
19...	--	24	--	10	--	62	40	34	--
JUL									
20...	--	24	--	9.3	--	62	30	29	--
AUG									
28...	0	12	--	5.5	--	36	20	15	<.0

01467053 PENNYPACK CREEK AT FRANKFORD AVENUE, PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 05...	262	20	--	4.6	.09	.10	1.0	450	.05
NOV 17...	214	32	--	3.0	.13	.85	.82	2320	.04
DEC 12...	284	4	288	3.7	.09	.88	.70	260	--
JAN 16...	232	10	242	4.4	.06	.55	.38	339	<.02
FEB 21...	12	2	14	3.9	.13	1.5	.80	250	--
MAR 20...	262	58	320	.31	.06	.58	.42	3450	--
APR 06...	168	20	188	3.0	.07	.34	.33	360	--
MAY 08...	256	12	268	3.7	.16	.52	.75	330	--
JUN 19...	238	14	252	5.0	.19	.23	.70	780	--
JUL 20...	254	20	274	3.5	.08	.12	.94	480	--
AUG 28...	120	856	--	6.1	.18	.78	2.1	26750	--

01467083 TACONY CREEK NEAR JENKINTOWN, PA

LOCATION.--Lat 40°05'08", long 75°08'08", Montgomery County, Hydrologic Unit 02040202, on right bank 700 ft (213 m) downstream from State Highway [illegible] (Washington Lane) and 0.5 mi (0.8 km) south of Jenkintown Railroad Station.

DRAINAGE AREA.--5.25 mi^2 (13.6 km^2).

PERIOD OF RECORD.--October 1973 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 200 ft (61 m), from topographic map.

REMARKS.--Records fair except those for no gage-height record Dec. 11 to Jan. 16, which are poor.

AVERAGE DISCHARGE.--5 years, 9.74 ft^3/s (0.276 m^3/s), 25.20 in/yr (640 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,560 ft^3/s (72.5 m^3/s) Aug. 23, 1974, gage height, 7.54 ft (2.298 m), from rating curve extended above 150 ft^3/s (4.25 m^3/s) on basis of slope-area measurement of peak flow; minimum recorded, 1.6 ft^3/s (0.045 m^3/s) Sept. 13, 15, 1976, gage height, 0.65 ft (0.198 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum(*):

		Discharge		Gage Height				Discharge		Gage Height	
Date	Time	(ft^3/s	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s	(m^3/s)	(ft)	(m)
Nov. 7	0700	549	15.5	3.42	1.042	May 24	0800	950	26.9	4.25	1.295
Nov. 8	0030	572	16.2	3.47	1.058	July 3	1615	459	13.0	3.21	0.978
Dec. 18	Unknown	Unknown		Unknown		July 27	2215	444	12.6	3.17	0.966
Dec. 21	Unknown	Unknown		Unknown		Aug. 28	0600	*2,050	58.1	*6.42	1.957
Jan. 9	Unknown	Unknown		Unknown		Sept.12	1830	670	19.0	3.69	1.125
Jan. 26	0530	740	21.0	3.83	1.167						

Minimum discharge, 2.4 ft^3/s (0.068 m^3/s) Oct. 7, 8, gage height, 0.69 ft (0.210 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	3.4	46	8.0	12	6.4	12	6.7	8.7	4.7	9.1	8.4
2	2.8	3.4	8.9	8.0	11	6.2	11	6.7	8.2	4.3	4.9	4.6
3	2.7	5.2	7.6	7.5	11	6.2	11	6.7	8.2	106	5.7	4.3
4	2.9	5.0	6.8	7.0	10	6.7	14	14	8.7	12	5.7	4.3
5	2.7	3.5	22	7.0	9.7	5.7	14	9.2	8.7	6.7	8.8	4.3
6	4.2	4.0	8.7	7.5	9.7	5.9	10	7.2	7.7	6.2	12	4.3
7	2.5	130	6.7	7.0	9.1	5.7	11	5.7	20	6.2	5.4	4.0
8	3.2	57	6.3	20	8.9	5.7	9.7	12	17	5.2	7.2	4.4
9	30	8.8	7.2	60	8.7	5.7	9.2	35	8.2	4.7	4.3	4.5
10	3.5	7.5	6.3	10	8.4	6.1	9.2	8.2	7.7	5.2	7.4	3.9
11	3.3	6.9	5.8	9.0	8.2	11	12	6.7	6.7	5.7	9.6	4.0
12	3.1	5.5	6.0	7.0	7.9	17	9.7	6.2	6.7	5.2	22	30
13	3.1	5.2	7.0	10	7.7	22	9.2	5.7	20	4.3	6.1	6.3
14	20	5.3	26	35	8.2	42	9.2	55	7.2	11	4.5	3.8
15	25	5.0	15	9.5	8.1	23	9.2	9.7	6.7	11	4.4	5.7
16	7.7	4.7	8.0	8.4	7.4	15	9.7	24	6.2	9.2	4.3	3.7
17	7.7	14	7.0	22	7.5	16	10	13	7.7	14	4.0	3.5
18	3.8	5.3	65	56	7.3	12	11	31	6.2	6.2	4.0	4.5
19	5.5	5.3	15	12	7.2	16	22	10	5.7	5.7	3.8	5.6
20	7.3	4.3	12	12	6.9	12	24	9.2	6.2	5.7	3.6	3.5
21	3.8	5.3	65	11	6.8	14	8.2	8.7	13	5.2	3.7	3.5
22	3.6	6.1	30	9.9	6.7	16	7.7	8.2	7.7	5.2	3.8	4.4
23	3.3	33	13	9.2	6.5	11	7.2	7.7	5.7	4.7	3.9	3.8
24	3.4	6.5	11	9.2	6.9	11	7.2	117	5.7	4.7	3.7	3.3
25	3.8	11	18	74	8.5	10	7.2	14	5.2	6.2	3.7	3.4
26	5.5	26	11	163	8.1	61	7.2	11	5.2	4.7	3.9	3.2
27	15	6.4	10	21	7.0	49	7.7	11	12	30	3.9	3.2
28	3.5	5.9	9.5	16	6.4	16	7.2	10	5.2	11	139	3.1
29	3.4	10	9.0	15	---	14	7.2	9.7	11	5.0	5.1	3.3
30	3.4	17	9.0	13	---	13	7.2	9.2	5.7	4.5	4.4	3.1
31	3.0	---	10	12	---	12	---	10	---	13	14	---
TOTAL	199.7	416.5	488.8	676.2	231.8	473.3	311.1	498.4	258.8	333.4	325.9	151.9
MEAN	6.44	13.9	15.8	21.8	8.28	15.3	10.4	16.1	8.63	10.8	10.5	5.06
MAX	30	130	65	163	12	61	24	117	20	106	139	30
MIN	2.5	3.4	5.8	7.0	6.4	5.7	7.2	5.7	5.2	4.3	3.6	3.1
CFSM	1.23	2.65	3.01	4.15	1.58	2.91	1.98	3.07	1.64	2.06	2.00	.96
IN.	1.41	2.95	3.46	4.79	1.64	3.35	2.20	3.53	1.83	2.36	2.31	1.08

CAL YR 1977 TOTAL 2984.7 MEAN 8.18 MAX 130 MIN 2.1 CFSM 1.56 IN 21.14
WTR YR 1978 TOTAL 4365.8 MEAN 12.0 MAX 163 MIN 2.5 CFSM 2.29 IN 30.93

01467084 ROCK CREEK ABOVE CURTIS ARBORETUM NEAR PHILADELPHIA, PA

LOCATION.--Lat 40°04'54", long 75°09'03", Montgomery County, Hydrologic Unit 02040203, on right bank 60 ft (18 m) upstream from stone arch bridge, 1,600 ft (488 m) upstream from Washington Lane, Cheltenham Township and about 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--1.15 mi² (2.98 km²).

PERIOD OF RECORD.--May 1971 to September 1978 (discontinued).

REVISED RECORDS.--WDR PA-75: 1971(M), 1973(P), 1974(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 245 ft (75 m), from topographic map.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--7 years, 2.47 ft³/s (0.070 m³/s), 29.17 in/yr (741 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 796 ft³/s (22.5 m³/s) Aug. 23, 1974, gage height, 6.56 ft (1.999 m), from rating curve extended above 130 ft³/s (3.7 m³/s); minimum, 0.24 ft³/s (0.007 m³/s) June 20, 1976, Aug. 11, 1978, Sept. 5, 1978; minimum gage height, 2.07 ft (0.631 m) Apr. 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	Unknown	Unknown		Unknown		June 13	0635	298	8.44	4.29	1.308
Jan. 9	0030	288	8.16	4.25	1.295	July 27	2210	325	9.20	4.40	1.341
May 24	0745	272	7.70	4.19	1.277	Aug. 28	0525	*578	16.4	*5.50	1.676
June 7	1705	265	7.50	4.16	1.268	Sept. 12	1820	412	11.7	4.78	1.457

Minimum discharge, 0.24 ft³/s (0.007 m³/s) Aug. 11, Sept. 5, gage height, 2.34 ft (0.713 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	.46	14	1.5	1.6	.99	1.6	1.4	1.6	.93	2.4	2.6
2	.79	.46	1.3	1.4	1.5	.96	1.5	1.0	1.7	.95	.79	.71
3	.58	1.1	1.1	1.3	1.4	.94	1.5	1.0	1.8	44	.87	.58
4	.58	.86	.94	1.2	1.3	1.0	1.9	3.5	2.0	1.9	.87	.58
5	.52	.55	1.1	1.2	1.3	.89	2.2	2.4	2.9	1.3	2.3	.46
6	1.0	1.0	.89	1.3	1.3	.95	1.5	1.4	1.6	1.4	3.0	.46
7	.50	30	.91	1.2	1.2	.98	1.7	1.0	10	.82	.79	.64
8	.65	15	.88	6.1	1.2	.96	1.3	3.6	4.9	.81	.58	.87
9	7.0	1.5	.93	21	1.2	1.1	1.3	10	1.7	.87	.46	1.2
10	7.0	1.3	.85	1.5	1.2	1.3	1.4	1.5	1.5	.91	1.4	.58
11	.65	1.1	.80	1.3	1.2	3.1	2.3	1.2	1.4	1.1	2.0	.64
12	.60	1.0	.85	1.3	1.2	4.6	1.6	.88	1.4	1.0	7.2	13
13	.60	.95	.95	5.4	1.1	5.0	1.4	.98	8.4	1.1	.96	1.1
14	4.5	1.0	25	9.8	1.2	11	1.3	12	1.3	3.8	.58	.58
15	6.0	.90	2.7	1.5	1.2	3.4	1.3	1.5	1.2	2.0	.64	.79
16	1.5	.85	1.5	1.3	1.1	2.9	1.3	6.3	1.1	4.8	.46	.52
17	2.0	3.0	1.0	8.9	1.1	3.6	1.4	2.3	1.9	3.6	.71	.52
18	.60	1.0	15	16	1.1	2.1	1.3	8.2	1.2	1.4	.87	.52
19	1.2	.90	2.5	1.9	1.1	2.6	5.8	1.6	1.1	1.3	.79	1.1
20	1.7	.70	2.0	2.3	1.1	1.8	6.3	1.4	1.1	1.2	.79	.58
21	.63	.90	23	1.6	1.0	2.7	1.3	1.3	3.5	1.1	.58	.58
22	.53	2.0	2.1	1.5	1.0	2.5	1.2	1.2	1.5	1.1	.64	.79
23	.55	10	1.8	1.5	1.0	1.7	1.1	1.5	1.1	1.2	.64	.58
24	.58	.97	1.7	1.5	1.1	1.5	1.1	34	1.0	1.1	.71	.52
25	.58	3.4	3.7	26	1.7	1.4	1.1	2.6	1.0	1.3	.71	.52
26	1.3	5.9	2.0	49	1.5	20	1.3	2.2	.87	1.1	.71	.46
27	4.8	.88	1.7	2.9	1.1	10	.93	2.1	2.5	13	.79	.46
28	.63	1.0	1.6	2.3	1.0	3.0	1.0	2.0	.95	3.2	38	.46
29	.52	2.1	1.5	2.0	---	2.2	.98	1.9	3.9	.71	.96	.41
30	.48	5.1	1.5	1.9	---	1.8	1.0	1.8	1.2	.64	.79	.41
31	.46	---	1.7	1.7	---	1.7	---	1.8	---	4.7	5.3	---
TOTAL	51.43	95.88	117.50	179.3	34.0	98.67	50.91	115.56	67.32	104.34	78.29	33.22
MEAN	1.66	3.20	3.79	5.78	1.21	3.18	1.70	3.73	2.24	3.37	2.53	1.11
MAX	7.0	30	25	49	1.7	20	6.3	34	10	44	38	13
MIN	.46	.46	.80	1.2	1.0	.89	.93	.88	.87	.64	.46	.41
CFSM	1.44	2.78	3.30	5.03	1.05	2.77	1.48	3.24	1.95	2.93	2.20	.97
IN.	1.66	3.10	3.80	5.79	1.10	3.19	1.65	3.73	2.18	3.37	2.53	1.07

CAL YR 1977 TOTAL 797.00 MEAN 2.18 MAX 34 MIN .46 CFSM 1.90 IN 25.76
WTR YR 1978 TOTAL 1026.42 MEAN 2.81 MAX 49 MIN .41 CFSM 2.44 IN 33.17

01467085 JENKINTOWN CREEK AT ELKINS PARK, PA

LOCATION.--Lat 40°04'45", long 75°06'36", Montgomery County, Hydrologic Unit 02040202, on right bank 20 ft (6 m) downstream from Cedar Road bridge, 0.5 mi (0.8 km) east of Elkins Park, and 1 mi (1.6 km) west of Rockledge.

DRAINAGE AREA.--1.17 mi² (3.03 km²).

PERIOD OF RECORD.--October 1973 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--5 years, 2.07 ft³/s (0.059 m³/s), 24.03 in/yr (610 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315 ft³/s (8.92 m³/s) Jan. 27, 1976, gage height, 3.35 ft (1.021 m), from magnet; minimum, 0.06 ft³/s (0.002 m³/s) Aug. 21, 1976, July 19, 1977; minimum gage height, 1.14 ft (0.347 m) July 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 80 ft³/s (2.27 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)	Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)
Nov. 7	0645	110	3.12	2.50	0.762	May 24	Unknown	Unknown		Unknown	
Nov. 8	0050	130	3.68	2.61	0.796	Aug. 12	1750	100	2.83	2.44	0.744
Dec. 18	Unknown	Unknown		Unknown		Aug. 28	0615	*264	7.48	*3.18	0.969
Jan. 9	0110	144	4.08	2.68	0.817	Sept. 12	1820	146	4.13	2.69	0.820
Jan. 26	Unknown	Unknown		Unknown							

Minimum discharge, 0.45 ft³/s (0.013 m³/s) Oct. 5, 6, 13, 14, gage height, 1.17 ft (0.357 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.1	12	2.4	2.7	2.0	2.5	2.5	2.2	1.5	1.4	1.8
2	.70	.94	2.4	2.4	2.5	2.0	3.0	2.0	2.2	1.5	1.5	1.0
3	.60	1.1	2.2	2.2	2.4	2.2	4.0	2.0	2.2	40	1.5	.94
4	.60	2.0	2.0	2.2	2.3	2.0	3.5	4.0	2.5	3.0	1.5	.94
5	.60	2.2	4.4	2.0	2.2	2.0	3.2	2.5	3.0	2.0	2.5	.94
6	.60	2.0	2.4	2.2	2.5	2.0	3.0	2.0	2.5	2.5	2.7	.94
7	.60	29	1.8	2.2	2.3	2.0	3.2	1.8	9.0	1.8	1.5	.94
8	.76	15	1.8	3.8	2.0	1.8	2.8	2.5	5.0	1.6	1.2	.94
9	4.6	2.2	1.8	18	2.0	1.8	2.5	5.8	3.0	1.7	1.0	.96
10	.76	1.8	1.6	2.9	2.0	1.9	3.0	2.2	2.5	1.8	1.4	.94
11	.60	1.8	1.6	2.4	2.0	2.5	4.0	2.0	2.5	2.0	6.4	1.0
12	.60	1.6	1.6	2.4	2.0	4.2	3.0	1.8	2.3	1.7	10	5.5
13	.60	1.3	1.6	3.3	1.8	5.7	2.5	1.8	7.0	2.0	2.6	1.5
14	3.1	1.3	20	7.2	2.0	13	2.5	9.6	2.5	3.5	1.5	.77
15	5.2	1.3	3.0	2.9	1.8	6.5	2.5	2.7	2.2	2.5	1.3	.79
16	1.1	1.3	2.0	2.7	1.8	4.1	2.5	6.0	2.0	4.0	1.2	.69
17	1.3	3.1	1.5	5.0	1.8	4.1	2.7	3.5	2.5	2.5	1.3	.60
18	.76	1.6	13	13	1.8	3.3	2.5	7.0	2.0	2.0	1.1	.62
19	.76	1.3	4.0	4.0	1.8	4.4	5.5	2.5	1.7	1.8	1.1	.89
20	1.1	1.1	3.0	5.0	1.8	3.3	6.0	2.2	1.5	1.7	1.1	.67
21	.76	1.3	17	3.5	1.8	3.8	2.4	2.0	3.5	1.6	1.1	.60
22	.76	1.6	3.6	3.0	1.8	3.8	2.2	1.9	1.5	1.5	.94	.61
23	.76	6.8	3.1	3.0	1.8	3.1	2.2	2.0	1.3	1.8	.94	.67
24	.76	1.8	3.1	3.0	1.6	3.1	2.2	30	1.2	1.5	1.1	.67
25	.94	2.2	3.8	30	1.8	2.9	2.2	3.5	1.2	2.0	1.0	.60
26	1.3	5.5	2.9	45	3.0	13	2.0	3.0	1.2	1.5	.94	.61
27	2.7	1.8	2.7	5.0	2.5	10	2.0	2.8	2.5	10	.94	.60
28	1.1	1.8	2.4	4.0	2.1	4.4	2.0	2.7	1.5	2.0	20	.60
29	1.1	2.0	2.4	3.5	---	4.1	2.0	2.9	3.5	1.5	.91	.60
30	1.1	3.3	2.4	3.0	---	3.6	2.0	2.4	1.7	1.2	.76	.60
31	1.1	---	2.4	2.7	---	3.3	---	2.4	---	4.0	2.7	---
TOTAL	39.32	101.14	129.5	193.9	57.9	125.9	85.6	122.0	79.4	109.7	75.13	29.53
MEAN	1.27	3.37	4.18	6.25	2.07	4.06	2.85	3.94	2.65	3.54	2.42	.98
MAX	5.2	29	20	45	3.0	13	6.0	30	9.0	40	20	5.5
MIN	.60	.94	1.5	2.0	1.6	1.8	2.0	1.8	1.2	1.2	.76	.60
CFSM	1.09	2.88	3.57	5.34	1.77	3.47	2.44	3.37	2.27	3.03	2.07	.84
IN.	1.25	3.21	4.11	6.16	1.84	4.00	2.72	3.88	2.52	3.48	2.39	.94

CAL YR 1977 TOTAL 593.93 MEAN 1.63 MAX 29 MIN .14 CFSM 1.39 IN 18.87
WTR YR 1978 TOTAL 1149.02 MEAN 3.15 MAX 45 MIN .60 CFSM 2.69 IN 36.50

01467086 TACONY CREEK AT COUNTY LINE, PHILADELPHIA, PA

LOCATION.--Lat 40°02'33", long 75°06'47", Philadelphia County, Hydrologic Unit 02040203, on left bank 20 ft (6 m) upstream from dam, 120 ft (37 m) upstream from Adams Avenue bridge in Philadelphia.

DRAINAGE AREA.--About 16.7 mi^2 (43.2 km^2).

PERIOD OF RECORD.--October 1965 to September 1970, July 1974 to current year.

REVISED RECORDS.--WDR PA-76-1: 1974.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 61.11 ft (18.626 m) National Geodetic Vertical Datum of 1929. Prior to June 1972 recording gage at site 1,600 ft (490 m) upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--9 years (Water years 1966-70, 1975-78), 25.5 ft^3/s (0.722 m^3/s) 20.73 in/yr (527 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,550 ft^3/s (129 m^3/s) Aug. 27, 1967, gage height, 13.19 ft (4.020 m), from rating curve extended above 350 ft^3/s (9.91 m^3/s) on basis of slope-area measurement at gage height 9.06 ft (2.761 m); minimum, 1.8 ft^3/s (0.051 m^3/s) Sept. 12, 1966, gage height, 2.82 ft (0.860 m), at upstream site.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft^3/s (31.2 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s	(m^3/s)	Gage Height (ft)	(m)	Date	Time	Discharge (ft^3/s	(m^3/s)	Gage Height (ft)	(m)
Nov. 8	0115	1,280	36.2	5.92	1.804	July 27	2300	1,190	33.7	5.74	1.750
Jan. 9	0200	1,500	42.5	6.33	1.929	Aug. 28	0645	*2,910	82.4	*8.63	2.630
Jan. 26	0615	1,560	44.2	6.44	1.963	Sept. 12	1915	1,180	33.4	5.72	1.743
July 3	1715	1,270	36.0	5.90	1.798						

Minimum discharge, 9.1 ft^3/s (0.26 m^3/s) Oct. 3, 5, 6, 7, 8, gage height, 2.22 ft (0.677 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	11	149	26	37	20	39	21	26	15	36	31
2	12	11	29	26	35	20	35	22	25	14	15	15
3	9.8	17	25	24	32	21	35	21	25	292	41	13
4	10	16	23	23	31	22	38	41	28	44	20	13
5	9.8	12	71	23	29	19	46	36	31	22	38	12
6	18	13	30	24	30	19	34	24	24	20	35	12
7	9.8	298	23	23	29	19	36	20	101	19	39	12
8	10	201	22	56	27	17	30	29	55	17	18	13
9	99	30	24	207	26	19	29	115	31	16	14	16
10	13	25	21	32	25	20	29	27	23	16	22	12
11	11	23	20	31	25	34	33	22	21	16	40	11
12	10	20	21	24	25	50	34	21	20	15	90	95
13	11	19	22	35	24	60	27	20	66	14	24	32
14	60	19	84	123	26	117	26	137	21	40	16	13
15	74	19	43	31	25	66	26	30	20	29	16	15
16	18	18	26	27	24	51	26	70	19	66	14	13
17	28	47	24	48	24	52	27	41	24	49	13	12
18	12	15	209	206	23	38	27	79	20	19	13	12
19	15	13	54	41	23	44	64	31	19	17	13	18
20	19	13	39	45	22	38	67	28	17	17	12	12
21	12	16	210	37	22	39	27	26	44	17	11	12
22	12	20	49	33	21	53	25	24	32	17	11	13
23	12	104	43	31	21	37	24	24	18	16	12	13
24	12	21	40	30	21	35	23	295	17	14	11	13
25	11	27	56	207	26	34	23	46	16	16	11	12
26	17	81	36	455	24	172	23	36	16	14	12	12
27	44	20	33	72	21	139	23	33	36	71	14	12
28	12	20	31	55	19	52	23	31	17	56	290	12
29	11	30	30	48	---	46	22	30	33	14	18	12
30	11	43	29	43	---	43	21	29	20	12	16	12
31	10	---	32	40	---	41	---	29	---	63	56	---
TOTAL	637.4	1222	1548	2126	717	1437	942	1438	865	1067	991	505
MEAN	20.6	40.7	49.9	68.6	25.6	46.4	31.4	46.4	28.8	34.4	32.0	16.8
MAX	99	298	210	455	37	172	67	295	101	292	290	95
MIN	9.8	11	20	23	19	17	21	20	16	12	11	11
CFSM	1.23	2.44	2.99	4.11	1.53	2.78	1.88	2.78	1.73	2.06	1.92	1.01
IN.	1.42	2.72	3.45	4.74	1.60	3.20	2.10	3.20	1.93	2.38	2.21	1.12

CAL YR 1977 TOTAL 8956.5 MEAN 24.5 MAX 298 MIN 3.3 CFSM 1.47 IN 19.95
WTR YR 1978 TOTAL 13495.4 MEAN 37.0 MAX 455 MIN 9.8 CFSM 2.22 IN 30.06

01467089 FRANKFORD CREEK AT TORRESDALE AVENUE, PHILADELPHIA, PA

LOCATION.--Lat 40°00'25", long 75°05'33", Philadelphia County, Hydrologic Unit 02040203, on left bank at Worrel Avenue, 400 ft (122 m) upstream from Torresdale Avenue, 1.5 mi (2.4 km) west of Frankford Arsenal in Philadelphia.

DRAINAGE AREA.--33.8 mi^2 (87.5 km^2).

PERIOD OF RECORD.--October 1965 to September 1970, October 1974 to current year.

REVISED RECORDS.--WDR PA-67: 1966(M).

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 1.08 ft (0.329 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--9 years (Water years 1966-70, 1975-78), 56.5 ft^3/s (1.600 m^3/s), 22.70 in/yr (577 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,550 ft^3/s (242 m^3/s) July 14, 1975, gage height, 13.47 ft (4.106 m), from rating curve extended above 1,300 ft^3/s (36.8 m^3/s); minimum, 0.11 ft^3/s (0.003 m^3/s) Sept. 7, 1978, gage height, 2.43 ft (0.741 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	0100	4,860	138	10.55	3.216	July 27	2245	5,170	146	10.83	3.301
Jan. 26	0515	4,250	120	10.00	3.048	Aug. 6	2400	4,020	114	9.79	2.984
May 24	0745	3,700	105	9.47	2.886	Aug. 28	0545	*8,420	238	*13.38	4.078
June 7	1645	4,490	127	10.22	3.115	Sept.12	1900	4,710	133	10.42	3.176
July 3	1645	3,820	108	9.59	2.923						

Minimum discharge, 0.11 ft^3/s (0.003 m^3/s) Sept. 7, gage height, 2.43 ft (0.741 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	16	672	67	48	22	54	24	38	21	102	43
2	33	14	50	80	46	25	46	23	38	20	28	15
3	16	31	35	54	41	31	41	24	44	950	104	9.8
4	28	24	30	50	43	27	58	95	40	81	38	5.1
5	15	12	236	52	45	19	69	69	61	53	118	7.6
6	40	14	52	58	40	20	40	55	36	45	133	6.1
7	15	1040	31	71	38	18	54	27	412	28	188	3.7
8	16	706	27	246	38	17	48	65	110	25	45	17
9	377	110	56	157	37	18	36	328	54	22	40	25
10	25	110	34	74	36	19	35	36	30	24	60	41
11	20	69	30	51	41	65	50	26	28	22	102	22
12	18	33	32	46	36	71	41	25	28	21	139	290
13	20	20	35	70	36	83	31	25	147	21	43	54
14	226	22	200	250	41	246	25	357	28	128	28	30
15	191	30	60	60	33	83	25	59	28	55	27	36
16	82	21	40	50	35	105	24	197	28	179	21	20
17	65	154	35	100	31	74	28	84	37	109	31	19
18	16	29	800	400	31	38	27	164	30	50	18	25
19	33	21	212	200	31	46	178	45	34	43	22	28
20	33	20	163	90	30	40	179	53	33	47	19	27
21	30	25	555	70	27	54	39	64	141	44	13	17
22	25	31	105	60	25	67	31	45	70	43	18	17
23	27	322	69	55	23	35	32	50	39	40	12	20
24	23	45	65	67	22	33	35	858	31	32	7.6	17
25	14	92	139	685	48	40	33	88	26	35	16	16
26	32	218	56	1310	35	512	44	76	25	27	12	17
27	190	25	65	122	41	404	55	70	72	261	18	17
28	17	24	56	80	21	108	89	48	25	172	890	17
29	24	65	58	67	---	76	49	40	94	38	11	17
30	29	130	67	54	---	52	28	42	36	32	8.3	18
31	27	---	67	52	---	50	---	41	---	234	154	---
TOTAL	1747	3473	4132	4848	999	2498	1524	3203	1843	2902	2465.9	897.3
MEAN	56.4	116	133	156	35.7	80.6	50.8	103	61.4	93.6	79.5	29.9
MAX	377	1040	800	1310	48	512	179	858	412	950	890	290
MIN	14	12	27	46	21	17	24	23	25	20	7.6	3.7
CFSM	1.67	3.43	3.94	4.62	1.06	2.39	1.50	3.05	1.82	2.77	2.35	.89
IN.	1.92	3.82	4.55	5.34	1.10	2.75	1.68	3.53	2.03	3.19	2.71	.99

CAL YR 1977	TOTAL	22432.9	MEAN	61.5	MAX	1040	MIN	6.1	CFSM 1.82	IN 24.69	
WTR YR 1978	TOTAL	30532.2	MEAN	83.6	MAX	1310	MIN	3.7	CFSM 2.47	IN 33.60	

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA

LOCATION.--Lat 39°57'11", long 75°08'05", Philadelphia County, Hydrologic Unit 02040202, at center of river on a line 200 ft (61 m) upstream of bridge from the north side of pier 12 north through channel station +14.3 to pierhead line on New Jersey side of river.

DRAINAGE AREA.--7,993 mi² (20,700 km²).

PERIOD OF RECORD.--August 1949 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1963 to current year.
pH: October 1967 to current year.
WATER TEMPERATURES: November 1960 to current year.
DISSOLVED OXYGEN: November 1960 to current year.

REMARKS.--Water-quality recorder (30°57'10", 75°08'18") located at river end of pier 11 north about 100 ft (30 m) downstream from bridge. Records of discharge are given for 01463500 Delaware River at Trenton, NJ. Further information on this station is given in U.S. Geological Survey Water-Supply Paper 1809-0.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,450 micromhos Nov. 20, 1964; minimum, 80 micromhos Aug. 30, 1971.
pH: Maximum, 8.1 Mar. 19, 1975; minimum, 5.6 Feb. 27, 1970.
WATER TEMPERATURES: Maximum, 31.0°C July 13-15, 1966; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 14.1 mg/L Dec. 14, 1962; minimum, 0.0 mg/L on many days each year.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 339 micromhos Sept. 30; minimum, 92 micromhos Oct. 25.
pH: Maximum, 7.8 Jan. 1; minimum, 6.2 Sept. 29.
WATER TEMPERATURES: Maximum, 29.0°C July 23, 24, Aug. 18-20; minimum, 1.0°C Jan. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT 06...	1320	119	6.6	17.5	5.3	--	42	21	12	3.0
NOV 03...	1145	160	6.7	13.5	6.0	--	50	25	14	3.6
DEC 01...	1430	133	7.1	7.0	9.2	--	57	22	15	4.7
APR 25...	0900	171	6.8	12.0	8.4	15	50	24	13	4.2
JUN 05...	1215	177	6.5	23.0	3.0	20	59	42	15	5.2
JUL 12...	1200	232	6.5	25.0	1.4	23	76	43	20	6.4
AUG 16...	1240	245	6.6	28.5	1.0	24	86	49	22	7.5
SEP 26...	1244	307	6.5	23.0	1.5	14	65	28	10	9.6

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 06...	6.8	25	.5	1.7	26	--	21	10	20	7.9
NOV 03...	7.9	25	.5	1.8	30	--	25	9.6	23	10
DEC 01...	8.4	24	.5	2.1	42	--	34	5.3	26	12
APR 25...	7.5	24	.5	1.6	31	0	25	7.9	23	12
JUN 05...	13	32	.7	2.0	21	0	17	11	25	13
JUL 12...	13	26	.6	2.5	40	0	33	20	31	17
AUG 16...	13	24	.6	3.0	45	0	37	18	41	18
SEP 26...	20	39	1.1	3.7	45	0	37	23	49	25

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT										
06...	79	--	--	--	--	--	--	--	--	--
NOV										
03...	92	--	--	--	--	--	--	--	--	--
DEC										
01...	101	--	--	--	--	--	--	--	--	--
APR										
25...	95	.80	.02	.82	.56	.44	1.0	1.8	.21	.08
JUN										
05...	131	.79	.03	.82	.60	.60	1.2	2.0	.23	.08
JUL										
12...	150	2.0	.01	2.0	.07	.93	1.0	3.0	.29	.11
AUG										
16...	164	1.4	.07	1.5	.41	.89	1.3	2.8	.24	.06
SEP										
26...	190	1.5	.16	1.7	.74	.66	1.4	3.1	.26	.09

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
06...	--	--	--	--	--	--	--	--	--
NOV									
03...	--	--	--	--	--	--	--	--	--
DEC									
01...	--	--	--	--	--	--	--	--	--
APR									
25...	--	--	--	--	--	--	--	--	6.3
JUN									
05...	--	--	--	--	--	--	--	--	5.8
JUL									
12...	1	8	10	58	12	.5	30	80	4.7
AUG									
16...	2	2	<10	100	67	<.5	78	110	4.5
SEP									
26...	--	--	--	--	--	--	--	--	9.3

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	145	102	121	154	140	146	143	130	135	149	138	144
2	124	99	111	160	143	150	136	127	130	151	140	146
3	112	100	106	168	152	157	129	121	124	153	142	148
4	112	104	108	171	158	164	128	121	124	158	147	152
5	114	108	111	172	162	168	---	---	---	164	153	158
6	124	114	118	177	167	173	---	---	---	175	158	165
7	131	119	125	183	157	174	117	110	113	181	165	171
8	134	125	130	183	166	174	118	109	114	183	165	174
9	139	126	133	197	178	187	127	111	118	190	172	179
10	144	120	132	192	178	186	123	115	119	178	152	168
11	151	138	145	185	159	174	124	116	120	---	---	---
12	149	146	148	167	145	157	125	116	120	---	---	---
13	---	---	---	147	143	145	128	118	123	---	---	---
14	---	---	---	113	103	108	129	118	124	---	---	---
15	---	---	---	109	97	101	---	---	---	---	---	---
16	---	---	---	104	94	100	---	---	---	---	---	---
17	143	132	137	105	96	100	---	---	---	---	---	---
18	---	---	---	102	94	98	---	---	---	179	157	169
19	---	---	---	103	96	99	143	133	138	174	141	162
20	---	---	---	108	99	104	142	130	137	163	141	156
21	---	---	---	121	103	111	---	---	---	164	153	159
22	---	---	---	128	115	122	156	144	150	160	151	156
23	---	---	---	130	120	125	154	145	149	163	153	159
24	---	---	---	130	122	126	157	145	151	164	158	161
25	96	92	94	128	118	124	155	149	152	---	---	---
26	---	---	---	128	119	124	153	144	149	---	---	---
27	---	---	---	124	117	120	158	145	150	---	---	---
28	---	---	---	137	119	128	160	148	154	---	---	---
29	---	---	---	165	129	135	156	148	153	---	---	---
30	---	---	---	143	134	138	154	142	149	---	---	---
31	145	134	140	---	---	---	152	138	146	---	---	---
MONTH	151	92	124	197	94	137	160	109	135	190	138	160

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	250	231	243	119	106	112	198	184	192
2	---	---	---	251	240	247	120	109	113	199	187	194
3	---	---	---	255	238	247	121	110	115	203	190	197
4	---	---	---	258	243	252	125	114	119	208	192	201
5	---	---	---	258	246	253	125	110	117	215	198	209
6	---	---	---	261	244	253	121	111	115	217	204	212
7	---	---	---	261	245	254	121	113	117	217	204	212
8	---	---	---	273	245	258	131	117	123	223	207	216
9	---	---	---	278	255	267	128	119	123	223	208	216
10	---	---	---	280	257	270	128	119	123	215	206	211
11	---	---	---	283	262	275	127	119	124	217	207	213
12	---	---	---	283	265	275	133	120	125	225	211	218
13	---	---	---	281	252	269	133	124	128	225	217	221
14	---	---	---	287	255	268	136	125	128	229	218	223
15	---	---	---	270	243	255	143	129	133	220	191	207
16	212	201	207	243	210	226	148	135	140	200	175	189
17	218	202	210	22[illegible]	199	210	147	138	143	185	165	174
18	218	204	212	20[illegible]	187	198	149	138	145	175	140	158
19	220	206	214	193	175	186	155	141	149	155	135	146
20	224	208	216	183	173	179	152	140	147	142	131	136
21	225	212	219	182	175	179	152	142	147	137	123	131
22	225	216	222	187	177	181	162	148	153	134	120	128
23	232	216	224	183	168	177	166	156	160	132	122	128
24	235	223	230	176	161	170	169	161	164	137	123	130
25	237	224	232	166	134	153	176	167	170	144	125	131
26	239	226	235	145	126	137	183	173	178	146	132	139
27	239	226	234	133	120	129	187	177	182	153	138	141
28	244	224	237	136	122	128	189	178	185	160	145	152
29	---	---	---	138	125	132	193	180	187	160	140	155
30	---	---	---	133	110	120	192	180	186	162	142	152
31	---	---	---	119	110	114	---	---	---	154	144	150
MONTH	244	201	222	287	110	210	193	106	142	229	120	177

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	158	148	153	255	230	243	320	288	303	261	233	247
2	---	---	---	257	232	245	318	291	304	259	239	247
3	---	---	---	260	224	245	320	280	304	255	240	248
4	---	---	---	257	219	233	319	290	305	255	243	251
5	---	---	---	245	223	233	318	287	301	261	247	255
6	---	---	---	245	228	237	314	287	300	266	251	260
7	---	---	---	243	229	236	301	271	286	272	255	265
8	---	---	---	246	230	239	284	255	270	284	261	272
9	---	---	---	246	234	241	273	252	262	281	261	272
10	---	---	---	249	234	243	268	251	262	290	260	276
11	---	---	---	250	242	246	270	257	264	286	259	278
12	---	---	---	---	---	---	267	249	260	291	267	278
13	210	202	205	---	---	---	263	229	251	298	268	281
14	211	198	205	---	---	---	255	223	239	304	275	289
15	214	198	206	---	---	---	252	225	237	302	274	289
16	220	197	208	---	---	---	251	227	238	301	275	290
17	222	197	211	---	---	---	253	228	240	303	265	278
18	224	197	210	---	---	---	252	229	241	306	265	283
19	223	198	210	---	---	---	257	234	246	308	281	297
20	223	201	213	---	---	---	260	236	248	309	278	296
21	230	206	217	282	261	272	259	236	249	304	277	291
22	225	205	217	284	262	276	264	242	254	298	278	289
23	231	206	219	287	264	279	266	243	257	310	285	296
24	232	209	220	289	269	280	274	247	260	307	288	298
25	240	213	224	298	270	287	290	252	270	306	293	299
26	239	215	229	308	279	294	284	259	274	321	295	305
27	239	220	230	311	282	298	288	262	273	325	306	315
28	238	223	231	308	281	294	286	244	264	329	312	320
29	246	225	235	314	283	297	267	233	248	334	315	325
30	250	228	239	317	283	301	260	237	247	339	323	332
31	---	---	---	318	287	302	260	240	250	---	---	---
MONTH	250	148	215	318	219	265	320	223	265	339	233	284

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.7	6.6	6.7	6.7	6.5	6.6	7.2	7.0	7.1	7.8	7.0	7.1
2	6.7	6.5	6.6	6.7	6.6	6.7	7.3	7.1	7.2	7.2	7.0	7.1
3	6.6	6.6	6.6	6.8	6.5	6.6	7.3	7.1	7.2	7.2	7.1	7.2
4	6.7	6.6	6.6	6.7	6.5	6.6	7.2	7.1	7.1	7.2	7.0	7.2
5	6.7	6.6	6.7	6.8	6.6	6.7	---	---	---	7.2	6.9	7.1
6	6.7	6.5	6.6	6.8	6.6	6.7	---	---	---	7.2	6.9	7.1
7	6.8	6.5	6.6	6.8	6.6	6.7	7.2	6.8	7.2	7.2	6.8	7.0
8	6.7	6.5	6.6	6.9	6.7	6.8	7.2	7.1	7.2	7.1	6.8	7.0
9	6.7	6.5	6.6	6.9	6.8	6.9	7.3	7.1	7.2	7.3	6.9	7.1
10	6.7	6.6	6.7	6.8	6.8	6.8	7.5	7.2	7.3	7.4	7.3	7.3
11	6.8	6.6	6.7	6.8	6.7	6.7	7.3	7.1	7.2	---	---	---
12	6.7	6.7	6.7	6.8	6.7	6.8	7.3	7.0	7.2	---	---	---
13	---	---	---	6.9	6.8	6.8	7.3	7.0	7.2	---	---	---
14	---	---	---	7.1	6.9	7.0	7.3	7.0	7.2	---	---	---
15	---	---	---	7.1	6.9	7.0	---	---	---	---	---	---
16	---	---	---	7.1	6.9	7.0	---	---	---	---	---	---
17	6.9	6.8	6.8	7.0	6.8	6.9	---	---	---	---	---	---
18	---	---	---	7.1	6.9	7.0	---	---	---	7.1	7.0	7.0
19	---	---	---	7.1	7.0	7.0	7.1	6.7	7.0	7.1	7.0	7.1
20	---	---	---	7.1	6.9	7.0	7.1	7.0	7.0	7.1	7.0	7.0
21	---	---	---	7.1	6.7	6.9	---	---	---	7.1	6.9	7.0
22	---	---	---	7.0	6.8	6.9	7.1	7.0	7.1	7.1	7.0	7.0
23	---	---	---	7.0	6.7	6.9	7.1	7.0	7.0	7.1	6.9	7.0
24	---	---	---	6.9	6.7	6.8	7.1	6.9	7.0	7.1	6.9	7.0
25	6.7	6.6	6.7	7.0	6.8	6.9	7.0	6.9	7.0	7.1	6.8	7.0
26	---	---	---	7.0	6.8	6.9	7.1	7.0	7.0	7.2	6.9	7.1
27	---	---	---	7.1	7.0	7.1	7.1	6.9	7.1	7.3	7.1	7.2
28	---	---	---	7.2	7.0	7.1	7.1	7.0	7.1	7.2	7.1	7.2
29	---	---	---	7.2	7.0	7.1	7.2	7.1	7.1	7.1	7.1	7.1
30	---	---	---	7.2	7.0	7.1	7.2	7.1	7.1	7.1	7.0	7.0
31	6.7	6.5	6.6	---	---	---	7.2	7.0	7.1	7.1	7.0	7.0
MONTH	6.9	6.5	6.7	7.2	6.5	6.9	7.5	6.7	7.1	7.8	6.8	7.1

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.5	6.8	7.2	6.9	6.6	6.7	6.9	6.8	6.8	7.0	6.7	6.9
2	7.5	7.4	7.5	6.9	6.7	6.8	6.9	6.8	6.9	6.9	6.7	6.8
3	7.6	7.4	7.5	6.9	6.6	6.8	6.9	6.8	6.9	6.9	6.7	6.8
4	7.6	7.4	7.5	6.9	6.7	6.8	6.9	6.8	6.9	6.9	6.7	6.8
5	7.6	7.4	7.5	7.0	6.7	6.8	6.9	6.9	6.9	6.8	6.7	6.7
6	7.6	7.4	7.5	6.9	6.7	6.8	6.9	6.8	6.9	6.8	6.6	6.7
7	7.6	7.4	7.5	7.0	6.8	6.9	6.9	6.8	6.9	6.9	6.6	6.7
8	7.6	7.0	7.3	7.0	6.6	6.8	7.0	6.8	6.9	6.9	6.6	6.8
9	7.3	7.1	7.2	7.1	6.5	6.8	7.0	6.9	6.9	6.9	6.6	6.8
10	7.3	7.1	7.2	7.1	6.8	6.9	7.0	6.9	6.9	6.9	6.7	6.8
11	7.3	7.1	7.2	7.1	6.8	6.9	6.9	6.9	6.9	6.9	6.7	6.8
12	---	---	---	7.1	6.8	6.9	6.9	6.8	6.8	6.9	6.8	6.8
13	---	---	---	7.1	6.9	7.0	6.9	6.8	6.8	6.9	6.8	6.8
14	---	---	---	7.1	6.9	7.0	6.9	6.8	6.9	6.9	6.8	6.8
15	---	---	---	7.2	7.1	7.1	6.9	6.8	6.8	6.9	6.8	6.9
16	---	---	---	7.2	7.1	7.2	7.0	6.8	6.9	6.9	6.8	6.9
17	7.0	6.6	6.8	7.2	7.1	7.1	6.9	6.8	6.9	6.8	6.8	6.8
18	7.0	6.7	6.9	7.1	7.0	7.1	6.9	6.8	6.8	6.9	6.7	6.8
19	6.9	6.8	6.8	7.1	7.0	7.0	6.9	6.7	6.8	6.9	6.8	6.8
20	6.9	6.7	6.8	7.1	7.0	7.0	6.8	6.7	6.8	6.9	6.8	6.8
21	6.9	6.6	6.8	7.1	7.0	7.0	6.9	6.7	6.8	6.8	6.8	6.8
22	6.9	6.7	6.8	7.1	6.9	7.0	6.9	6.7	6.8	6.8	6.7	6.7
23	6.9	6.7	6.8	7.2	7.0	7.1	6.9	6.7	6.8	6.7	6.2	6.6
24	6.8	6.6	6.7	7.1	7.0	7.1	6.8	6.7	6.8	6.7	6.5	6.6
25	6.8	6.5	6.7	7.2	7.1	7.1	6.8	6.7	6.7	6.6	6.5	6.6
26	6.8	6.5	6.7	7.1	7.0	7.1	7.2	6.7	6.9	6.6	6.5	6.6
27	6.9	6.6	6.7	7.0	7.0	7.0	6.7	6.6	6.7	6.6	6.5	6.5
28	6.9	6.6	6.8	7.1	6.9	7.0	6.9	6.6	6.7	6.6	6.5	6.6
29	---	---	---	7.1	6.9	7.0	6.9	6.7	6.8	6.6	6.5	6.6
30	---	---	---	7.0	6.9	6.9	6.9	6.7	6.8	6.7	6.5	6.6
31	---	---	---	6.9	6.8	6.8	---	---	---	6.7	6.5	6.6
MONTH	7.6	6.5	7.1	7.2	6.5	7.0	7.2	6.6	6.8	7.0	6.2	6.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	6.5	6.6	6.6	6.5	6.5	6.7	6.5	6.6	6.5	6.4	6.5
2	---	---	---	6.7	6.5	6.6	6.7	6.5	6.6	6.5	6.4	6.5
3	---	---	---	6.7	6.4	6.5	6.7	6.6	6.6	6.5	6.4	6.5
4	---	---	---	6.7	6.4	6.6	6.7	6.5	6.6	6.5	6.4	6.5
5	---	---	---	6.7	6.5	6.6	6.7	6.6	6.7	6.5	6.3	6.4
6	---	---	---	6.7	6.5	6.6	6.7	6.6	6.7	6.5	6.4	6.4
7	---	---	---	6.7	6.6	6.6	6.7	6.6	6.7	6.5	6.4	6.4
8	---	---	---	6.7	6.6	6.6	6.7	6.7	6.7	6.5	6.3	6.4
9	---	---	---	6.7	6.6	6.6	6.8	6.7	6.7	6.5	6.3	6.4
10	---	---	---	6.6	6.6	6.6	6.8	6.6	6.7	6.5	6.4	6.5
11	---	---	---	6.6	6.6	6.6	6.7	6.6	6.7	6.6	6.4	6.5
12	---	---	---	---	---	---	6.7	6.6	6.7	6.5	6.4	6.5
13	6.9	6.6	6.7	---	---	---	6.7	6.6	6.7	6.5	6.4	6.5
14	6.9	6.7	6.8	---	---	---	6.7	6.6	6.7	6.5	6.3	6.4
15	6.8	6.5	6.7	---	---	---	6.6	6.5	6.6	6.5	6.3	6.4
16	6.7	6.6	6.7	---	---	---	6.6	6.5	6.6	6.5	6.3	6.4
17	6.7	6.6	6.6	---	---	---	6.6	6.5	6.6	6.6	6.3	6.5
18	6.7	6.5	6.6	---	---	---	6.6	6.5	6.6	6.6	6.3	6.5
19	6.7	6.3	6.5	---	---	---	6.6	6.5	6.6	6.5	6.3	6.4
20	6.5	6.4	6.5	---	---	---	6.6	6.5	6.6	6.5	6.3	6.4
21	6.5	6.4	6.5	6.7	6.7	6.7	6.6	6.5	6.6	6.6	6.4	6.5
22	6.5	6.4	6.5	6.7	6.6	6.6	6.6	6.5	6.5	6.6	6.4	6.5
23	6.5	6.4	6.5	6.7	6.6	6.6	6.6	6.5	6.5	6.6	6.4	6.5
24	6.5	6.4	6.5	6.7	6.6	6.7	6.6	6.5	6.5	6.6	6.4	6.5
25	6.5	6.4	6.5	6.7	6.6	6.6	6.6	6.4	6.5	6.6	6.4	6.5
26	6.5	6.4	6.5	6.7	6.5	6.6	6.6	6.4	6.5	6.6	6.4	6.5
27	6.6	6.3	6.5	6.7	6.5	6.6	6.6	6.4	6.5	6.6	6.4	6.5
28	6.6	6.4	6.5	6.6	6.5	6.6	6.6	6.4	6.5	6.6	6.4	6.5
29	6.6	6.5	6.5	6.7	6.5	6.6	6.7	6.4	6.5	6.6	6.2	6.5
30	6.7	6.5	6.5	6.7	6.5	6.6	6.5	6.4	6.4	6.6	6.4	6.5
31	---	---	---	6.7	6.5	6.6	6.5	6.4	6.4	---	---	---
MONTH	6.9	6.3	6.6	6.7	6.4	6.6	6.8	6.4	6.6	6.6	6.2	6.5

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	17.5	18.0	13.0	12.5	13.0	7.5	7.0	7.5	3.0	2.0	2.5
2	18.0	17.5	18.0	13.5	13.0	13.0	7.0	6.5	7.0	2.5	2.0	2.5
3	17.5	17.5	17.5	13.5	13.0	13.5	6.5	6.5	6.5	2.5	2.0	2.0
4	17.5	17.5	17.5	14.0	13.5	14.0	6.5	6.5	6.5	2.5	2.0	2.0
5	17.5	17.0	17.5	14.5	14.0	14.0	---	---	---	2.5	2.0	2.5
6	17.5	17.5	17.5	14.5	14.0	14.5	---	---	---	2.5	2.0	2.5
7	17.5	17.5	17.5	14.5	14.5	14.5	6.0	5.5	5.5	3.0	2.5	2.5
8	17.5	17.0	17.0	14.5	14.0	14.5	5.5	5.0	5.5	3.5	2.5	3.0
9	17.0	17.0	17.0	15.0	14.5	14.5	5.5	4.5	5.0	5.5	3.5	4.0
10	17.0	16.0	16.5	15.0	14.5	15.0	4.5	3.5	4.0	4.5	3.5	4.0
11	16.5	16.0	16.5	15.0	13.5	14.0	4.0	3.0	3.5	---	---	---
12	16.5	16.5	16.5	14.0	12.5	13.5	3.5	2.5	3.0	---	---	---
13	---	---	---	13.0	12.5	12.5	3.0	2.5	3.0	---	---	---
14	---	---	---	11.0	10.5	11.0	3.0	2.5	3.0	---	---	---
15	---	---	---	10.5	9.5	10.5	---	---	---	---	---	---
16	---	---	---	10.0	9.5	9.5	---	---	---	---	---	---
17	13.5	13.5	13.5	9.5	9.0	9.5	---	---	---	---	---	---
18	---	---	---	9.5	9.0	9.0	---	---	---	2.0	1.5	2.0
19	---	---	---	9.0	8.5	8.5	4.0	3.5	4.0	2.0	1.5	2.0
20	---	---	---	9.0	8.5	8.5	4.0	3.5	4.0	2.0	1.0	1.5
21	---	---	---	9.0	8.5	9.0	---	---	---	1.5	1.5	1.5
22	---	---	---	9.5	9.0	9.0	5.5	5.0	5.0	1.5	1.5	1.5
23	---	---	---	9.5	9.0	9.0	5.5	5.0	5.5	2.0	1.5	1.5
24	---	---	---	9.5	9.0	9.0	5.5	5.0	5.0	2.0	1.5	1.5
25	12.5	12.0	12.5	9.5	9.0	9.0	5.5	5.0	5.0	2.0	1.5	2.0
26	---	---	---	9.0	8.5	9.0	5.0	4.0	4.5	2.5	2.0	2.5
27	---	---	---	8.5	7.5	8.0	4.5	4.0	4.0	2.5	2.0	2.5
28	---	---	---	8.0	7.5	8.0	4.0	3.5	4.0	2.0	1.5	1.5
29	---	---	---	8.0	7.0	7.5	3.5	3.0	3.5	1.5	1.0	1.5
30	---	---	---	7.5	7.0	7.5	3.5	2.5	3.0	1.5	1.5	1.5
31	13.0	12.5	12.5	---	---	---	3.0	2.5	2.5	1.5	1.5	1.5
MONTH	18.5	12.0	16.5	15.0	7.0	11.0	7.5	2.5	4.5	5.5	1.0	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.5	1.5	4.0	3.5	4.0	8.5	7.5	8.0	13.0	12.5	13.0
2	1.5	1.5	1.5	4.5	4.0	4.0	8.5	8.0	8.0	13.5	13.0	13.0
3	2.0	1.5	1.5	4.0	3.5	4.0	8.5	8.0	8.5	14.0	13.5	13.5
4	2.0	1.5	1.5	4.0	3.5	3.5	9.0	8.5	8.5	14.0	13.5	13.5
5	1.5	1.5	1.5	3.5	3.5	3.5	9.0	8.5	9.0	13.5	13.5	13.5
6	1.5	1.5	1.5	4.0	3.5	3.5	9.0	8.0	8.5	13.5	13.5	13.5
7	1.5	1.5	1.5	4.0	3.5	4.0	8.5	8.0	8.0	14.0	13.5	13.5
8	2.0	1.5	1.5	4.0	3.5	4.0	8.5	8.0	8.5	14.0	13.5	14.0
9	2.0	1.5	1.5	4.5	3.5	4.0	9.0	8.5	8.5	14.5	14.0	14.0
10	2.0	1.5	2.0	4.5	4.0	4.0	9.5	8.5	9.0	15.0	14.0	14.5
11	2.0	1.5	2.0	4.5	4.0	4.5	10.0	9.0	9.5	15.0	14.5	15.0
12	---	---	---	5.0	4.5	4.5	10.5	9.5	10.0	15.5	15.0	15.5
13	---	---	---	5.0	4.5	5.0	10.5	10.0	10.5	15.5	15.5	15.5
14	---	---	---	6.0	5.0	5.5	11.0	10.5	10.5	16.0	15.5	15.5
15	---	---	---	6.5	5.5	6.0	11.0	10.5	10.5	15.5	15.5	15.5
16	2.5	2.0	2.5	6.5	6.0	6.5	11.5	10.5	11.0	15.5	15.5	15.5
17	2.5	2.5	2.5	6.5	5.5	6.0	11.5	11.0	11.5	16.0	15.0	15.5
18	3.0	2.5	2.5	6.0	5.0	5.5	12.0	11.5	11.5	15.5	14.0	14.5
19	3.0	2.5	3.0	5.5	4.5	5.0	12.0	11.5	12.0	14.5	14.0	14.0
20	3.0	2.5	3.0	5.5	5.0	5.0	12.0	11.5	12.0	15.0	14.0	14.5
21	3.5	3.0	3.0	6.0	5.0	6.0	12.0	11.0	11.5	16.0	14.5	15.5
22	3.5	3.0	3.5	7.0	6.0	6.5	11.5	11.0	11.0	17.0	15.5	16.0
23	3.5	3.0	3.5	8.0	7.0	7.5	11.5	11.0	11.5	18.5	16.5	17.5
24	3.5	3.5	3.5	8.5	8.0	8.0	12.0	11.5	11.5	18.5	18.0	18.0
25	4.0	3.5	3.5	8.0	7.0	7.5	12.5	11.5	12.0	18.5	18.0	18.5
26	4.0	3.5	4.0	7.5	6.5	7.0	12.5	12.0	12.0	19.0	18.5	18.5
27	4.0	3.5	4.0	7.0	6.0	6.5	12.5	12.0	12.0	18.5	18.0	18.5
28	4.0	3.5	4.0	6.5	6.0	6.0	12.5	12.0	12.5	18.5	18.0	18.0
29	---	---	---	7.0	6.0	6.5	13.0	12.5	12.5	19.0	17.5	18.5
30	---	---	---	7.5	6.5	7.0	13.0	12.5	13.0	20.0	19.0	19.5
31	---	---	---	8.0	7.0	7.5	---	---	---	21.0	19.5	20.5
MONTH	4.0	1.5	2.5	8.5	3.5	5.5	13.0	7.5	10.5	21.0	12.5	15.5

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	20.5	21.0	26.0	25.5	25.5	27.0	27.0	27.0	27.5	27.0	27.0
2	---	---	---	25.5	25.0	25.5	27.0	27.0	27.0	27.5	27.0	27.0
3	---	---	---	25.0	24.5	25.0	27.5	27.0	27.0	27.0	26.5	27.0
4	---	---	---	24.5	24.0	24.0	27.0	27.0	27.0	27.0	26.5	26.5
5	---	---	---	24.0	23.5	24.0	27.0	26.5	27.0	27.0	26.5	26.5
6	---	---	---	24.5	24.0	24.0	27.0	27.0	27.0	27.0	26.5	26.5
7	---	---	---	24.5	24.0	24.5	27.5	27.0	27.0	27.0	26.5	27.0
8	---	---	---	25.0	24.0	24.5	27.5	27.0	27.5	26.5	26.0	26.5
9	---	---	---	25.0	24.5	25.0	27.5	27.5	27.5	26.0	25.5	26.0
10	---	---	---	26.0	25.0	25.5	27.5	27.5	27.5	25.5	25.0	25.5
11	---	---	---	26.0	25.5	25.5	28.0	27.5	27.5	25.5	25.0	25.5
12	---	---	---	---	---	---	27.5	27.5	27.5	25.5	25.0	25.5
13	24.0	23.5	23.5	---	---	---	27.5	27.0	27.5	25.5	25.0	25.0
14	23.5	23.0	23.0	---	---	---	28.0	27.5	27.5	25.0	24.5	24.5
15	23.0	22.5	23.0	---	---	---	28.0	27.5	28.0	24.5	24.0	24.5
16	23.0	22.5	23.0	---	---	---	28.5	28.0	28.0	24.5	24.0	24.5
17	23.0	22.5	22.5	---	---	---	28.5	28.5	28.5	25.5	24.0	24.5
18	23.0	22.5	23.0	---	---	---	29.0	28.5	28.5	25.5	24.5	25.0
19	23.5	23.0	23.5	---	---	---	29.0	28.5	28.5	25.0	24.5	24.5
20	24.0	23.5	23.5	---	---	---	29.0	28.5	28.5	24.5	24.0	24.5
21	24.0	23.5	24.0	28.0	27.5	27.5	28.5	28.0	28.5	24.5	24.0	24.5
22	24.5	24.0	24.0	28.0	27.0	27.5	28.5	28.0	28.5	24.5	24.0	24.5
23	24.5	24.0	24.5	29.0	27.5	28.0	28.5	28.0	28.5	24.0	24.0	24.0
24	24.5	24.0	24.5	29.0	28.0	28.5	28.5	28.5	28.5	24.0	23.5	23.5
25	25.0	24.0	24.5	28.0	27.5	28.0	28.5	28.0	28.5	23.5	23.5	23.5
26	25.0	24.5	24.5	28.5	27.5	28.0	28.5	28.0	28.0	23.5	23.0	23.0
27	25.0	24.5	25.0	28.5	27.5	28.0	28.0	28.0	28.0	23.0	22.5	23.0
28	25.5	25.0	25.5	28.0	28.0	28.0	28.0	27.5	27.5	23.0	22.5	23.0
29	26.0	25.5	25.5	28.0	27.5	28.0	27.5	27.5	27.5	22.5	22.0	22.5
30	26.0	25.5	26.0	28.0	27.5	27.5	28.0	27.5	27.5	22.5	22.0	22.0
31	---	---	---	27.5	27.0	27.5	28.0	27.5	27.5	---	---	---
MONTH	26.0	20.5	24.0	29.0	23.5	26.5	29.0	26.5	27.5	27.5	22.0	25.0

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.2	5.9	6.5	9.3	8.1	8.6	12.6	11.6	12.0
2	---	---	---	7.0	5.6	6.2	10.5	9.5	10.0	12.7	11.7	12.2
3	6.1	5.5	5.8	6.7	4.8	5.7	10.9	10.3	10.5	12.7	12.2	12.5
4	6.6	5.5	6.0	5.9	4.2	5.0	10.6	10.3	10.4	12.6	12.2	12.4
5	6.5	5.2	5.9	6.1	4.1	4.9	---	---	---	12.4	11.9	12.2
6	6.1	4.5	5.3	5.9	4.1	4.9	---	---	---	12.3	11.4	11.8
7	5.8	3.7	4.8	6.1	4.4	5.3	11.1	10.9	11.0	12.0	11.0	11.5
8	5.5	3.4	4.4	7.0	5.2	6.0	11.1	10.6	10.9	11.8	10.8	11.2
9	5.1	3.4	4.2	7.2	6.2	6.6	11.0	10.4	10.7	12.0	10.5	11.2
10	6.5	3.9	5.0	6.6	5.6	6.1	11.6	10.5	11.1	12.1	11.8	11.9
11	6.6	4.3	5.3	7.1	5.5	6.0	11.9	10.9	11.2	---	---	---
12	5.2	4.9	5.1	7.6	6.0	6.7	11.8	10.6	11.2	---	---	---
13	---	---	---	7.4	7.0	7.2	11.7	10.4	11.0	---	---	---
14	---	---	---	8.8	7.3	7.9	11.3	10.3	10.8	---	---	---
15	---	---	---	7.8	5.8	6.6	---	---	---	---	---	---
16	---	---	---	7.4	6.0	6.8	---	---	---	---	---	---
17	8.1	7.3	7.8	7.5	6.2	6.8	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	12.9	12.5	12.7
19	---	---	---	---	---	---	12.7	12.3	12.5	13.0	12.5	12.8
20	---	---	---	---	---	---	12.5	12.2	12.3	13.0	12.3	12.6
21	---	---	---	8.8	8.0	8.4	---	---	---	12.6	12.2	12.4
22	---	---	---	8.8	7.5	8.1	11.8	11.6	11.7	12.5	12.1	12.3
23	---	---	---	8.4	7.0	7.6	11.7	11.2	11.5	12.4	11.9	12.1
24	---	---	---	8.1	6.5	7.1	11.6	11.0	11.2	12.2	11.6	11.9
25	9.1	8.4	8.7	8.6	6.8	7.7	11.5	10.8	11.1	12.0	11.2	11.6
26	---	---	---	9.1	7.0	7.9	11.9	11.1	11.4	12.6	11.3	11.9
27	---	---	---	9.6	8.7	9.1	11.9	11.5	11.6	12.6	12.4	12.5
28	---	---	---	9.5	8.9	9.1	11.9	11.5	11.6	12.8	12.4	12.6
29	---	---	---	9.7	8.6	9.0	11.9	11.4	11.6	12.8	12.6	12.7
30	---	---	---	9.2	8.0	8.6	12.3	11.4	11.8	12.9	12.7	12.7
31	7.5	6.0	6.7	---	---	---	12.6	11.6	12.0	12.9	12.6	12.7
MONTH	9.1	3.4	5.8	9.7	4.1	7.0	12.7	8.1	11.2	13.0	10.5	12.2

01467200 DELAWARE RIVER AT BENJAMIN FRANKLIN BRIDGE AT PHILADELPHIA, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.9	12.6	12.7	---	---	---	12.0	11.3	11.6	8.0	5.7	6.6
2	12.9	12.4	12.6	---	---	---	11.8	11.4	11.5	7.3	5.4	6.3
3	12.8	12.3	12.5	---	---	---	11.8	10.8	11.4	6.4	4.1	5.2
4	12.9	12.3	12.5	---	---	---	11.3	9.8	10.7	6.5	4.6	5.4
5	12.7	12.1	12.4	---	---	---	11.8	10.6	11.2	5.6	3.9	4.6
6	12.6	12.0	12.2	---	---	---	11.9	10.9	11.3	5.3	3.3	4.0
7	12.5	12.1	12.3	---	---	---	12.0	11.1	11.5	6.0	3.1	4.1
8	12.6	12.0	12.1	---	---	---	11.7	11.0	11.3	5.8	3.2	4.2
9	12.4	11.5	11.9	---	---	---	11.5	11.0	11.3	4.9	3.1	3.8
10	12.2	11.4	11.7	---	---	---	11.5	10.7	11.0	5.2	2.9	3.9
11	12.1	11.1	11.5	---	---	---	11.0	10.0	10.4	4.9	3.1	4.0
12	---	---	---	---	---	---	11.0	9.7	10.3	6.5	4.0	4.9
13	---	---	---	---	---	---	10.7	9.6	10.0	6.0	3.7	4.8
14	---	---	---	---	---	---	10.4	9.7	10.0	6.2	4.2	5.0
15	---	---	---	---	---	---	10.2	9.2	9.7	7.3	4.7	6.0
16	---	---	---	---	---	---	10.2	9.0	9.6	7.5	6.1	6.8
17	---	---	---	---	---	---	9.9	8.7	9.3	7.2	5.8	6.3
18	---	---	---	---	---	---	9.5	8.1	8.8	8.5	6.0	7.1
19	---	---	---	---	---	---	9.7	7.4	8.3	8.8	7.3	8.0
20	---	---	---	---	---	---	9.2	7.2	8.0	8.9	7.9	8.4
21	---	---	---	---	---	---	9.6	7.6	8.6	8.9	8.0	8.3
22	---	---	---	---	---	---	9.8	7.9	8.8	8.6	7.6	7.9
23	---	---	---	---	---	---	9.6	8.0	8.6	7.6	6.6	7.0
24	---	---	---	---	---	---	9.3	7.9	8.4	7.0	5.2	5.9
25	---	---	---	---	---	---	8.8	6.5	7.7	6.7	5.1	5.8
26	---	---	---	---	---	---	8.1	6.4	7.1	6.4	5.1	5.6
27	---	---	---	---	---	---	7.6	6.1	6.6	6.2	4.8	5.4
28	---	---	---	11.8	11.5	11.6	7.1	5.1	6.0	6.3	4.7	5.5
29	---	---	---	11.9	11.6	11.7	7.4	5.6	6.4	6.5	4.8	5.4
30	---	---	---	11.9	11.5	11.7	7.7	5.5	6.5	6.0	4.3	5.2
31	---	---	---	11.8	11.4	11.6	---	---	---	5.5	3.4	4.3
MONTH	12.9	11.1	12.2	11.9	11.4	11.7	12.0	5.1	9.4	8.9	2.9	5.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.1	3.0	3.9	4.0	.6	1.9	.2	.0	.2	1.5	.0	.4
2	---	---	---	3.7	.7	1.9	.2	.0	.2	1.7	.0	.4
3	---	---	---	3.8	.7	1.8	.2	.0	.1	1.1	.0	.4
4	---	---	---	4.4	1.1	2.1	.3	.0	.1	1.5	.0	.6
5	---	---	---	3.8	1.0	2.2	.6	.0	.2	1.3	.2	.6
6	---	---	---	3.7	.9	2.0	1.1	.0	.3	.8	.0	.3
7	---	---	---	3.6	1.1	2.4	1.3	.0	.6	.6	.0	.2
8	---	---	---	3.1	.9	1.9	3.0	.2	1.3	.4	.0	.1
9	---	---	---	2.9	.8	1.7	4.0	.4	2.0	.6	.0	.2
10	---	---	---	2.4	.6	1.1	4.8	.9	2.1	1.3	.0	.5
11	---	---	---	1.4	.1	.7	2.8	.1	1.1	1.8	.0	.7
12	---	---	---	---	---	---	2.7	.0	.9	1.6	.4	.9
13	---	---	---	---	---	---	4.5	.2	1.8	1.3	.0	.6
14	---	---	---	---	---	---	4.4	1.1	2.5	1.0	.0	.5
15	---	---	---	---	---	---	3.7	1.1	2.1	.9	.0	.2
16	---	---	---	---	---	---	3.7	.7	1.6	.5	.0	.2
17	---	---	---	---	---	---	2.8	.3	1.4	.7	.0	.2
18	---	---	---	---	---	---	3.4	.4	1.6	1.0	.0	.2
19	2.5	.3	1.2	---	---	---	3.0	.6	1.4	.9	.0	.2
20	2.0	.1	.8	---	---	---	2.9	.5	1.4	1.3	.0	.3
21	1.1	.0	.2	1.8	.9	1.3	3.0	1.0	1.8	1.5	.0	.6
22	1.1	.0	.2	1.9	.1	.6	2.1	.6	1.1	2.5	.2	.8
23	1.1	.0	.2	1.3	.0	.3	1.5	.1	.6	2.0	.2	.8
24	1.0	.0	.3	.9	.0	.2	1.3	.0	.4	2.3	.2	.8
25	1.7	.0	.6	.7	.0	.2	.7	.0	.2	2.3	.4	1.1
26	2.7	.1	1.0	.1	.0	.1	.8	.0	.2	3.0	.7	1.4
27	2.3	.0	.9	.5	.0	.2	.8	.0	.2	2.3	.5	1.1
28	2.4	.0	1.0	.2	.0	.1	1.7	.0	.6	1.6	.1	.7
29	3.3	.1	1.3	.2	.0	.1	2.8	.1	1.0	2.0	.4	.9
30	4.0	.3	1.4	.9	.0	.3	2.2	.0	.5	2.2	.2	.9
31	---	---	---	.7	.0	.2	1.1	.0	.4	---	---	---
MONTH	5.1	.0	1.0	4.4	.0	1.1	4.8	.0	1.0	3.0	.0	.6

01467470 SCHUYLKILL RIVER AT PORT CARBON, PA

LOCATION--Lat 40°41'42", long 76°09'37", Schuylkill County, Hydrologic Unit 02040203, on left bank, 1,500 ft (457 m) upstream from Mill Creek, 2 mi (3.2 km) east of Pottsville.

DRAINAGE AREA.--27.1 mi² (70.2 km²).

PERIOD OF RECORD.--April 1975 to June 1978 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: April 1975 to June 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum, 2,570 mg/L Sept. 24, 1975; minimum 4 mg/L June 18, Sept. 1, 1976.
SEDIMENT LOADS: Maximum, 3,720 tons (3,370 tonnes) June 9, 1978; minimum, 0.29 ton (0.26 tonne) Sept. 5, 6, 1976.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum, 1,920 mg/L June 9; minimum, 6 mg/L Mar. 8.
SEDIMENT LOADS: Maximum, 3,720 tons (3,370 tonnes) June 9; minimum, 0.36 ton (0.33 tonne) Mar. 8.

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	44	444	105	39	46	4.8	178	138	66
2	38	62	6.4	38	53	5.4	127	86	29
3	31	23	1.9	40	51	5.5	112	69	21
4	28	22	1.7	52	76	11	98	54	14
5	28	18	1.4	41	55	6.1	96	56	15
6	28	14	1.1	38	48	4.9	93	51	13
7	27	12	.87	114	436	199	76	44	9.0
8	26	11	.77	163	250	110	69	39	7.3
9	85	728	302	200	190	103	65	44	7.7
10	54	75	11	205	325	180	60	41	6.6
11	47	68	8.6	211	420	239	53	38	5.4
12	44	61	7.2	177	235	112	50	45	6.1
13	40	56	6.0	141	120	46	51	38	5.2
14	46	125	16	115	84	26	73	115	23
15	91	512	156	98	61	16	96	55	14
16	100	427	368	84	49	11	89	48	12
17	354	1020	1130	77	41	8.5	92	43	11
18	194	90	47	70	38	7.2	126	140	48
19	152	105	43	64	30	5.2	124	55	18
20	126	85	29	56	23	3.5	116	46	14
21	116	83	26	54	25	3.6	246	210	139
22	102	89	25	51	22	3.0	227	95	58
23	87	81	19	50	26	3.5	170	65	30
24	74	73	15	49	28	3.7	134	50	18
25	67	67	12	47	25	3.2	174	130	61
26	62	61	10	66	42	7.5	139	75	28
27	58	56	8.8	51	31	4.3	126	52	18
28	52	49	6.9	48	23	3.0	111	36	11
29	50	43	5.8	47	21	2.7	99	34	9.1
30	47	46	5.8	54	30	4.4	89	33	7.9
31	41	44	4.9	---	---	---	81	31	6.8
TOTAL	2339	---	2382.14	2540	---	1143.0	3440	---	732.1

01467470 SCHUYLKILL RIVER AT PORT CARBON, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	74	29	5.8	82	29	6.4	25	10	.68
2	73	26	5.1	72	26	5.1	25	10	.68
3	63	30	5.1	64	25	4.3	24	8	.52
4	56	34	5.1	57	28	4.3	23	8	.50
5	53	36	5.2	52	27	3.8	23	7	.43
6	52	34	4.8	52	23	3.2	24	7	.45
7	50	32	4.3	52	20	2.8	23	7	.43
8	116	180	56	47	18	2.3	22	6	.36
9	839	450	1020	44	26	3.1	20	8	.43
10	341	175	161	41	24	2.7	20	8	.43
11	232	128	80	40	27	2.9	21	7	.40
12	170	105	48	38	19	1.9	25	7	.47
13	136	91	33	37	17	1.7	31	43	3.6
14	120	84	27	36	15	1.5	116	527	400
15	96	71	18	34	15	1.4	124	145	49
16	85	63	14	32	14	1.2	115	61	19
17	77	54	11	31	14	1.2	96	53	14
18	69	47	8.8	31	14	1.2	82	48	11
19	62	39	6.5	30	13	1.1	83	71	17
20	60	31	5.0	28	21	1.6	94	51	13
21	55	28	4.2	28	19	1.4	114	91	32
22	52	25	3.5	28	19	1.4	156	156	66
23	48	26	3.4	28	20	1.5	185	156	78
24	45	24	2.9	27	17	1.2	189	143	73
25	62	180	30	26	14	.98	154	84	35
26	522	436	751	26	12	.84	394	623	1170
27	284	85	65	26	12	.84	858	836	1990
28	189	55	28	26	12	.84	587	475	753
29	145	42	16	---	---	---	359	260	252
30	115	37	11	---	---	---	257	225	156
31	97	34	8.9	---	---	---	185	145	72
TOTAL	4438	---	2447.6	1115	---	62.70	4454	---	5209.38

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	138	155	58	32	26	2.2	53	105	15
2	111	140	42	32	23	2.0	50	96	13
3	96	128	33	31	21	1.8	50	81	11
4	88	116	28	31	18	1.5	48	73	9.5
5	85	121	28	36	21	2.0	43	63	7.3
6	71	105	20	34	60	5.5	39	48	5.1
7	67	92	17	32	57	4.9	43	57	6.6
8	62	83	14	31	42	3.5	54	72	10
9	56	77	12	40	220	24	313	1920	3720
10	52	63	8.8	34	95	8.7	110	650	193
11	50	49	6.6	31	70	5.9	84	325	74
12	49	43	5.7	31	55	4.6	71	190	36
13	45	38	4.6	34	60	5.5	81	375	82
14	41	36	4.0	623	1610	2920	63	175	30
15	40	38	4.1	493	550	732	56	154	23
16	40	34	3.7	366	587	621	52	143	20
17	38	29	3.0	376	592	605	50	131	18
18	37	24	2.4	339	494	455	47	123	16
19	41	31	3.4	269	310	225	43	118	14
20	48	52	6.7	213	185	106	39	110	12
21	45	54	6.6	158	165	70	40	115	12
22	42	48	5.4	121	95	31	51	850	117
23	41	53	5.9	99	80	21	38	520	53
24	38	51	5.2	123	413	155	36	155	15
25	38	46	4.7	102	225	62	33	150	13
26	38	39	4.0	84	210	48	31	140	12
27	37	36	3.6	77	190	40	31	180	15
28	38	31	3.2	73	160	32	30	175	14
29	36	40	3.9	67	140	25	28	165	12
30	34	34	3.1	66	160	29	33	175	16
31	---	---	---	61	134	22	---	---	---
TOTAL	1642	---	350.6	4139	---	6271.1	1740	---	4594.5

01467500 SCHUYLKILL RIVER AT POTTSVILLE, PA

LOCATION.--Lat 40°41'01", long 76°11'11", Schuylkill County, Hydrologic Unit 02040203, 90 ft (27 m) upstream from Pottsville-Palo Alto Bridge, 1.5 mi (2.4 km) downstream from Mill Creek and 4.2 mi (6.8 km) upstream from West Branch.

DRAINAGE AREA.--53.4 mi² (138 km²).

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT 13...	1045	9813	9813	460	--	9.0	10.7	200
NOV 17...	0945	9813	9813	380	--	10.5	10.8	156
DEC 07...	1030	9813	9813	400	--	3.0	13.2	156
JAN 31...	0940	9813	9813	400	--	--	--	159
FEB 21...	1245	9813	9813	500	--	--	--	290
MAR 13...	1255	9813	9813	500	5.3	9.0	10.2	260
APR 04...	1255	9813	9813	420	5.4	7.0	10.2	140
MAY 30...	1340	9813	9813	360	5.6	18.0	9.1	122
JUN 19...	1345	9813	9813	420	5.2	20.0	8.4	148
JUL 20...	1315	9813	9813	500	4.3	18.5	9.8	200
AUG 22...	1245	9813	9813	900	4.2	18.0	9.0	462
SEP 20...	1030	9813	9813	1000	5.0	15.0	9.3	505

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)
OCT 13...	38	31	31	30	31	18	200	10	330
NOV 17...	--	25	--	25	--	6	150	8.0	300
DEC 07...	--	27	--	24	--	6	150	11	276
JAN 31...	18	27	--	25	--	8	150	9.0	104
FEB 21...	30	47	--	47	--	6	290	12	3
MAR 13...	36	42	--	42	--	8	270	28	438
APR 04...	20	24	--	22	--	6	160	11	316
MAY 30...	16	20	--	19	--	8	120	10	270
JUN 19...	12	28	--	20	--	6	150	9.0	334
JUL 20...	36	41	--	26	--	4	200	11	410
AUG 22...	42	76	--	67	--	2	440	12	806
SEP 20...	82	81	--	75	--	6	510	10	1010

01467500 SCHUYLKILL RIVER AT POTTSVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT 13...	22	--	.76	.02	.21	.14	10	2650
NOV 17...	6	--	.60	.02	.24	.17	10	3350
DEC 07...	12	288	.74	.02	.22	.14	10	2930
JAN 31...	26	398	.60	.02	.23	.30	10	3292
FEB 21...	--	322	.90	.02	.34	.22	10	3900
MAR 13...	20	458	1.0	.03	.40	.27	60	3650
APR 04...	12	--	.58	.02	.21	.20	10	3300
MAY 30...	18	288	.82	.02	.25	.22	<10	2200
JUN 19...	2	336	.80	.02	.30	.30	30	2260
JUL 20...	20	430	.68	.02	.29	.51	10	1820
AUG 22...	32	--	.69	.01	.30	.20	40	4850
SEP 20...	46	--	.72	.02	.50	.32	60	1030

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 17...	0945	1960	--	<10	<50	1920	20	180
FEB 21...	1245	2420	--	<10	<50	3250	--	280
MAY 30...	1340	1520	--	<10	<50	1560	<10	170
AUG 22...	1245	4080	<3	<10	<50	--	190	540

01467950 WEST BRANCH SCHUYLKILL RIVER AT CRESSONA, PA

LOCATION.--Lat 40°38'03", long 76°11'33", Schuylkill County, Hydrologic Unit 02040203, at bridge on State Route 183 in Cressona, 0.2 mi (0.3 km) upstream from Panther Creek and 1.3 mi (2.1 km) upstream from Schuylkill River.

DRAINAGE AREA.--52.5 mi² (136 km²).

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 13...	1015	9813	9813	460	--	9.0	10.6	200
NOV 17...	0920	9813	9813	500	--	10.5	10.7	322
DEC 06...	1410	9813	9813	450	--	7.0	10.6	180
JAN 31...	0920	9813	9813	490	--	--	--	232
FEB 21...	1205	9813	9813	600	--	5.0	12.2	315
MAR 13...	1230	9813	9813	600	7.4	8.5	10.4	310
APR 04...	1230	9813	9813	500	7.2	8.0	10.1	240
MAY 30...	1315	9813	9813	500	7.5	17.0	9.3	255
JUN 19...	1320	9813	9813	600	7.2	18.5	8.6	284
JUL 19...	1250	9813	9813	600	7.6	20.0	9.0	480
AUG 22...	1215	9813	9813	700	7.3	16.5	9.0	369
SEP 20...	1000	9813	9813	500	7.5	15.0	9.4	245

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT 13...	0	37	38	26	27	8	200	8.0	276
NOV 17...	0	38	--	--	--	16	360	6.0	390
DEC 06...	0	33	--	26	--	20	180	15	318
JAN 31...	0	41	--	35	--	22	200	10	426
FEB 21...	0	57	--	47	--	34	300	12	570
MAR 13...	0	56	--	46	--	28	300	24	426
APR 04...	0	38	--	39	--	20	260	16	344
MAY 30...	0	44	--	39	--	26	250	11	480
JUN 19...	0	60	--	36	--	34	310	16	600
JUL 19...	0	64	--	88	--	22	310	11	642
AUG 22...	0	70	--	48	--	30	350	11	652
SEP 20...	0	51	--	29	--	20	110	13	594

01467950 WEST BRANCH SCHUYLKILL RIVER AT CRESSONA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT								
13...	--	--	.80	.03	.20	.28	20	3800
NOV								
17...	--	--	.60	.02	.24	.08	10	4200
DEC								
06...	16	334	.80	.04	.26	.12	30	4100
JAN								
31...	--	--	.80	.03	.24	.29	<10	4439
FEB								
21...	--	--	.80	.02	.46	.17	20	5900
MAR								
13...	--	--	.92	.02	.47	.11	10	5250
APR								
04...	--	--	.76	.02	.34	.14	30	5650
MAY								
30...	--	--	.82	.02	.39	.12	10	4550
JUN								
19...	--	--	.98	.02	.48	.10	30	5000
JUL								
19...	--	--	.76	.01	.29	.09	10	2540
AUG								
22...	--	--	.63	.01	.39	.13	20	3800
SEP								
20...	--	--	.86	.03	.35	.15	40	820

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV								
17...	0920	1420	--	<10	<50	2420	40	130
FEB								
21...	1205	1260	--	<10	<50	3400	90	160
MAY								
30...	1315	1300	--	<10	<50	2570	50	140
AUG								
22...	1215	640	<3	<10	<50	3700	110	140

01468500 SCHUYLKILL RIVER AT LANDINGVILLE, PA

LOCATION.--Lat 40°37'45", long 76°07'30", Schuylkill County, Hydrologic Unit 02040203, on left bank 10 ft (3 m) upstream from highway bridge at Landingville, 0.1 mi (0.2 km) upstream from Mahannon Creek, and 5 mi (8.0 km) downstream from West Branch Schuylkill River.

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--August 1947 to April 1953, October 1963 to September 1965, August 1973 to current year.

REVISED RECORDS.--WDR PA-75-1: 1973(p), 1974 (P).

GAGE.--Water-stage recorder. Datum of gage is 470.64 ft (143.451 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 27, 1947 nonrecording gage 10 ft (3 m) downstream at same datum.

REMARKS.--Records good except those for periods of no gage-height record, Nov. 12 to Dec. 29 and Jan. 3-24, which are fair.

AVERAGE DISCHARGE.--12 years (1947-52, 1963-65, 1975 to current year), 297 ft³/s (8.411 m³/s), 30.34 in/yr (771 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 8,570 ft³/s (243 m³/s) Nov. 25, 1950, gage height, 13.29 ft (4.051 m); minimum, 19 ft³/s (0.54 m³/s) Oct. 30, 31, Nov. 4, 1963.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood in June 1972 reached a stage of 17.36 ft (5.291 m), discharge, 14,000 ft³/s (396 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 17	1000	1760	49.8	7.51	2.289
Nov. 10	2330	1610	45.6	7.22	2.201
Jan. 9	Unknown	*3850	109	*10.91	3.325
Jan. 26	1130	3520	99.7	10.29	3.136
Mar. 14	1745	1870	53.0	7.43	2.265
Mar. 27	1200	3330	94.3	9.99	3.045
May 14	1430	3360	95.2	10.04	3.060
May 16	2045	1820	51.5	7.33	2.234
June 9	0930	1530	43.3	6.74	2.054
Aug. 7	2230	1640	46.4	7.29	2.222

Minimum discharge, 80 ft³/s (2.27 m³/s) Sept. 30, gage height, 3.25 (0.991 m), but may have been less during periods of no gage-height record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	267	251	1300	408	539	152	806	226	377	149	187	130
2	251	234	1000	386	493	145	683	221	356	145	155	110
3	210	251	800	361	452	142	634	216	346	241	148	105
4	195	305	650	340	409	142	630	213	319	265	225	95
5	188	245	550	320	359	127	611	262	296	187	157	90
6	193	223	640	305	371	127	557	242	284	171	138	95
7	176	781	450	300	371	136	532	211	310	159	473	90
8	153	946	400	350	349	134	449	213	346	151	604	90
9	514	761	370	3000	328	134	416	310	714	147	276	90
10	402	764	340	1500	307	138	409	251	446	145	203	90
11	322	1150	320	1000	290	145	409	240	365	142	256	90
12	287	880	295	800	270	149	406	237	334	134	256	90
13	264	700	270	700	259	205	377	270	409	133	190	100
14	306	600	370	670	267	810	325	2120	319	132	193	85
15	725	530	800	600	248	1050	293	1950	287	203	175	90
16	629	490	700	510	237	876	276	1480	267	161	163	95
17	1530	460	600	450	229	679	270	1580	256	153	152	100
18	1050	440	800	500	213	564	253	1500	237	135	145	90
19	839	400	1000	400	195	557	296	1270	226	128	131	170
20	735	370	800	370	190	626	371	1010	221	125	118	130
21	649	330	1500	400	185	718	340	839	232	120	118	120
22	571	320	1400	330	178	962	304	710	245	117	118	200
23	484	330	1000	280	173	1020	287	626	208	117	112	140
24	438	310	800	291	171	1020	287	742	193	120	105	114
25	408	290	900	412	168	889	281	672	175	150	100	110
26	392	500	800	2430	147	1510	273	567	175	121	120	123
27	372	400	700	1590	147	3030	262	532	175	121	100	112
28	335	370	600	1050	154	2150	253	490	169	137	170	102
29	283	350	540	823	---	1480	248	452	161	124	150	114
30	263	370	502	691	---	1130	234	446	156	113	120	94
31	255	---	452	608	---	936	---	419	---	193	140	---
TOTAL	13686	14351	21649	22175	7699	21883	11772	20517	8604	4639	5698	3254
MEAN	441	478	698	715	275	706	392	662	287	150	184	108
MAX	1530	1150	1500	3000	539	3030	806	2120	714	265	604	200
MIN	153	223	270	280	147	127	234	211	156	113	100	85
CFSM	3.32	3.59	5.25	5.38	2.07	5.31	2.95	4.98	2.16	1.13	1.38	.81
IN.	3.83	4.01	6.06	6.20	2.15	6.12	3.29	5.74	2.41	1.30	1.59	.91

CAL YR 1977 TOTAL 123818 MEAN 339 MAX 2610 MIN 65 CFSM 2.55 IN 34.63
WTR YR 1978 TOTAL 155927 MEAN 427 MAX 3030 MIN 85 CFSM 3.21 IN 43.61

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA

LOCATION.--Lat 40°48'25", long 75°58'20", Schuylkill County, Hydrologic Unit 02040203, on left bank at pumping plant of Panther Valley Water Co., 0.6 mi (1.0 km) upstream from Tamaqua, and 0.8 mi (1.3 km) upstream from Panther Creek.

DRAINAGE AREA.--42.9 mi^2 (111.1 km^2).

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1302. June 1916 to September 1919, gage heights and discharge measurements only, in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 756: Drainage area. WSP 971: 1942. WSP 1302: 1922, 1926-30. WSP 1432: 1920-21, 1933.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 817.48 ft (249.168 m) National Geodetic Vertical Datum of 1929. Prior to June 21, 1929, nonrecording gage at site 3,600 ft (1,100 m) downstream at datum 28.64 ft (8.729 m) lower.

REMARKS.--Records good except those for periods of no gage-height record, Mar. 15 to Apr. 19, which are fair. Flow regulated by Still Creek Reservoir 6.5 mi (10.5 km) upstream (see p.237). Figures of daily discharge do not include water diverted from reservoir.

AVERAGE DISCHARGE.--59 years, 93.2ft^3/s (2.639 m^3/s), 29.49 in/yr (749 mm/yr), adjusted for diversion and, since February 1933, for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,790 ft^3/s (221 m^3/s) Aug. 18, 1955, gage height, 11.10 ft (3.383 m), from rating curve extended above 3,200 ft^3/s (91 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 1.8 ft^3/s (0.051 m^3/s) Dec. 18, 1931, gage height, 1.21 ft (0.369 m); minimum daily, 2.9 ft^3/s (0.082 m^3/s) Sept. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,550 ft^3/s (43.9 m^3/s) Jan. 9, gage height, 5.35 ft (1.631 m); minimum discharge, 18 ft^3/s (0.51 m^3/s) Sept. 12, and part of each day Sept. 14-18; minimum gage height, 2.07 ft (0.631 m) July 25, Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	55	332	109	142	40	200	56	89	32	20	29
2	61	53	295	102	122	38	170	54	80	31	20	25
3	47	56	243	85	111	36	160	48	81	47	22	22
4	41	81	201	74	99	35	160	47	83	64	30	21
5	37	68	184	68	92	30	150	61	70	44	25	20
6	38	59	170	61	91	30	140	59	62	37	24	21
7	37	192	135	58	97	35	125	52	64	33	45	20
8	37	437	109	133	82	33	120	51	83	32	50	20
9	125	378	102	1200	74	32	110	75	126	30	31	20
10	135	328	85	857	70	35	105	66	92	29	49	19
11	105	469	77	487	66	40	105	60	76	27	60	19
12	92	347	74	296	62	50	100	59	68	26	58	19
13	75	270	70	230	58	60	95	69	80	25	45	19
14	79	207	105	202	57	250	85	718	67	25	37	18
15	192	167	210	164	54	330	80	999	59	29	33	18
16	175	138	207	138	54	300	75	701	54	28	30	19
17	500	125	198	125	48	200	70	625	52	27	28	19
18	400	111	236	126	47	160	65	600	50	26	27	20
19	300	94	239	106	46	150	70	498	50	24	25	49
20	250	83	201	108	45	175	86	350	45	23	24	32
21	200	83	336	100	43	200	90	270	44	23	23	24
22	175	83	359	86	41	300	79	213	60	22	22	42
23	150	81	267	79	39	350	73	177	46	21	21	43
24	130	77	220	74	37	300	71	218	40	21	21	32
25	123	72	321	90	36	250	67	207	38	21	21	29
26	109	125	306	730	36	500	67	164	37	21	24	25
27	102	105	253	658	37	1000	64	141	38	20	29	25
28	85	98	207	410	37	800	61	127	34	22	41	24
29	75	94	172	270	---	600	59	126	35	21	49	22
30	66	102	143	199	---	350	60	112	41	20	32	21
31	59	---	125	165	---	250	---	101	---	25	33	---
TOTAL	4052	4638	6182	7590	1823	6959	2962	7104	1844	876	999	736
MEAN	131	155	199	245	65.1	224	98.7	229	61.5	28.3	32.2	24.5
MAX	500	469	359	1200	142	1000	200	999	126	64	60	49
MIN	37	53	70	58	36	30	59	47	34	20	20	18
(ƒ)	1.6	6.0	4.1	1.4	.8	2.6	.8	1.7	.9	.4	0	0
MEAN≠	143	178	203	247	65.0	229	97.7	231	60.7	26.4	27.0	17.1
CFSM≠	3.34	4.16	4.74	5.76	1.51	5.34	2.28	5.39	1.41	.61	.63	.40
IN.≠	3.85	4.64	5.47	6.64	1.57	6.15	2.54	6.22	1.58	.71	.73	.45

CAL YR 1977 TOTAL 36139.6 MEAN 99.0 MAX 1070 MIN 8.1 MEAN≠ 101 CFSM≠ 2.36 IN.≠ 31.98
WTR YR 1978 TOTAL 45765.0 MEAN 125 MAX 1200 MIN 18 MEAN≠ 128 CFSM≠ 2.99 IN.≠ 40.53

ƒ Diversion from Still Creek Reservoir, equivalent in cubic feet per second, furnished by Panther Valley Water Co.
≠ Adjusted for diversion and change in contents in Still Creek Reservoir.

01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1977 to September 1978.

WATER-QUALITY DATA, DECEMBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
DEC 28...	1140	204	125	6.4	2.0	13.6	530	K100
MAR 14...	1545	284	165	6.0	4.0	15.1	3500	1800
APR 19...	1210	78	120	7.0	8.0	11.4	K58000	K17000
JUL 18...	1320	25	200	6.4	22.0	11.5	1100	K33
SEP 27...	1215	28	120	6.7	14.0	9.9	K12000	>2000

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SULFATE DISSOLVED (MG/L AS SO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)
DEC 28...	420	23	6.2	1.8	17	60	0	2	0
MAR 14...	29000	29	8.6	1.8	20	160	1	0	1
APR 19...	6900	25	6.6	2.0	25	120	2	1	10
JUL 18...	K12	32	8.5	2.6	25	30	0	1	2
SEP 27...	880	32	8.8	2.5	23	140	0	1	0

DATE	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC 28...	3	710	440	5	130	0	30	--
MAR 14...	4	8000	620	11	280	0	80	--
APR 19...	5	630	330	5	210	0	40	6.3
JUL 18...	4	200	20	1	290	0	40	--
SEP 27...	2	170	60	4	230	1	20	--

01469710 LITTLE SCHUYLKILL RIVER NEAR TAMAQUA, PA

LOCATION.--Lat 40°45'18", long 75°56'48", Schuylkill County, Hydrologic Unit 02040203, at bridge on State Route 443, 2.3 mi (3.7 km) downstream from Owe Creek and 3.7 mi (6.0 km) downstream from Tamaqua.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Twelve water-quality analyses were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)
DEC								
28...	1100	308	400	5.6	2.0	12.4	830	K34
MAR								
14...	1700	516	280	6.0	3.0	15.2	K62000	5300
APR								
19...	1300	146	560	7.0	9.0	11.2	K100000	2700
JUL								
18...	1400	65	1000	7.2	24.0	7.2	6500	230
SEP								
27...	1245	90	1100	6.3	16.5	9.8	630	K7

DATE	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SULFATE DIS-SOLVED (MG/L AS SO4)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
DEC									
28...	2000	120	28	12	110	130	1	1	0
MAR									
14...	38000	80	19	8.0	77	280	0	2	2
APR									
19...	9500	240	55	25	250	60	1	0	1
JUL									
18...	K48	460	110	45	430	1000	1	0	1
SEP									
27...	48	460	100	51	510	20	0	1	0

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
DEC								
28...	7	3200	2000	5	1100	0	120	--
MAR								
14...	5	24000	1900	15	900	0	140	--
APR								
19...	3	5500	3500	0	2400	0	160	10
JUL								
18...	8	4500	2900	3	3800	3	100	--
SEP								
27...	4	12000	8100	6	4800	1	410	--

01469710 LITTLE SCHUYLKILL RIVER NEAR TAMAQUA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)
OCT 13...	1120	9813	9813	490	--	10.5	10.7	200
NOV 17...	1030	9813	9813	400	--	--	10.8	184
DEC 07...	1115	9813	9813	410	5.7	3.5	--	166
JAN 31...	1035	9813	9813	370	--	--	--	141
FEB 21...	1340	9813	9813	500	--	--	--	225
MAR 13...	1355	9813	9813	600	6.8	9.5	10.6	260
APR 07...	1325	9813	9813	500	5.6	11.5	10.7	220
MAY 25...	1340	9813	9813	360	6.0	16.0	8.4	128
JUN 21...	1315	9813	9813	600	7.3	23.0	8.9	264
JUL 20...	1315	9813	9813	1000	6.0	21.0	8.6	540
AUG 22...	1405	9813	9813	900	6.3	24.0	8.2	440
SEP 20...	1130	9813	9813	800	6.9	17.0	9.7	558

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	MAGNESIUM, DISSOLVED (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)
OCT 13...	14	45	46	21	22	10	200	12	244
NOV 17...	0	35	--	26	--	8	150	11	100
DEC 07...	10	--	--	--	--	8	150	13	260
JAN 31...	14	32	--	16	--	8	130	14	398
FEB 21...	20	44	--	31	--	12	210	16	228
MAR 13...	18	61	--	29	--	20	260	29	404
APR 07...	30	48	--	27	--	8	240	13	478
MAY 25...	0	25	--	17	--	8	120	13	266
JUN 21...	0	68	--	25	--	18	240	12	586
JUL 20...	42	107	--	74	--	10	510	11	908
AUG 22...	0	102	--	46	--	26	440	13	772
SEP 20...	64	90	--	83	--	12	450	12	834

01469710 LITTLE SCHUYLKILL RIVER NEAR TAMAQUA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
OCT 13...	76	--	1.4	.06	.25	.16	30	6550
NOV 17...	12	--	1.1	.01	.20	.11	<10	3600
DEC 07...	26	--	1.2	.04	.23	.35	<10	3800
JAN 31...	20	398	1.1	.02	.27	.38	<10	2723
FEB 21...	68	296	.98	.02	.77	.22	10	5750
MAR 13...	76	480	1.2	.03	1.0	.36	70	6750
APR 07...	30	--	1.1	.01	.60	.24	20	7350
MAY 25...	24	290	.95	.02	.30	.16	10	2290
JUN 21...	14	506	1.0	.02	.44	.10	10	3700
JUL 20...	102	1010	1.0	.03	.47	.20	40	15400
AUG 22...	50	--	1.0	.02	.65	.20	20	4900
SEP 20...	60	894	1.0	.02	.46	.14	60	1910

DATE	TIME	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 17...	1030	<10	160	--	<10	<50	1450	40	150
FEB 21...	1340	.06	3400	--	<10	<50	2120	60	200
MAY 25...	1340	.02	--	--	<10	<50	1110	10	110
AUG 22...	1405	.04	1420	<3	<10	<50	3950	120	160

01470500 SCHUYLKILL RIVER AT BERNE, PA

LOCATION.--Lat 40°31'21", long 75°59'55", Berks County, Hydrologic Unit 02040203, on right bank 50 ft (15 m) upstream from highway bridge at Berne, 0.5 mi (8 km) upstream from Mill Creek, and 6.5 mi (10.5 km) downstream from Little Schuylkill River. Water-quality sampling site at bridge 50 ft (15 m) downstream.

DRAINAGE AREA.--355 mi^2 (919 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1947 to current year. Monthly discharge only for August 1947, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 310.65 ft (94.686 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation at low flow by mine pumpage and by Still Creek Reservoir about 25 mi (40 km) upstream from station (see p.237).

AVERAGE DISCHARGE.--31 years, 715 ft^3/s (20.2 m^3/s), 27.36 in/yr (695 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,800 ft^3/s (1,210 m^3/s) June 22, 1972, gage height, 19.0 ft (5.79 m), from floodmark in gage shelter, from rating curve extended above 17,000 ft^3/s (481 m^3/s); minimum, 31 ft^3/s (0.88 m^3/s) Sept. 2, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1942, reached a stage of 15.0 ft (4.57 m), from floodmarks, discharge, 26,900 ft^3/s (762 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,400 ft^3/s (348 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 17	1330	44.6	126	7.98	2.432
Nov. 8	0730	44.2	125	7.96	2.426
Nov. 11	0300	5,080	144	8.29	2.527
Dec. 1	0915	5,460	155	8.48	2.585
Dec. 21	1745	5,720	162	8.61	2.624
Jan. 9	1045	*12,300	348	11.02	3.359
Jan. 26	1500	*12,300	348	*11.04	3.365
Mar. 14	2130	5,380	152	8.44	2.573
Mar. 27	1445	11,100	314	10.64	3.243
May 14	1900	11,400	323	10.74	3.274

Minimum discharge. 193 ft^3/s (5.47 m^3/s) Sept. 14, 15; minimum gage height, 4.87 ft (1.484 m) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	538	3940	1010	1200	361	1960	478	803	279	351	321
2	788	512	3070	935	1070	351	1600	470	724	272	300	269
3	565	531	2250	840	969	344	1370	451	691	375	265	239
4	485	729	1770	778	861	339	1340	438	694	635	378	227
5	433	620	1580	726	780	342	1280	525	595	380	309	215
6	425	576	1730	690	789	328	1090	516	555	324	287	227
7	403	2100	1390	672	824	347	1080	459	550	295	1030	221
8	354	3860	1160	941	823	318	952	437	808	277	2010	221
9	1310	2990	1110	8760	700	306	860	677	1360	273	845	227
10	1500	2390	973	5060	650	311	816	591	1010	262	582	227
11	1030	4140	932	3180	600	329	807	540	776	258	574	221
12	826	2900	850	2290	560	385	794	525	677	242	788	221
13	704	2190	791	1850	538	495	731	547	760	236	633	239
14	650	1730	1030	1700	541	1850	680	5410	645	233	493	204
15	1640	1450	2000	1370	503	3620	637	6630	558	387	433	221
16	1470	1250	1930	1150	481	2860	606	4260	513	295	382	233
17	3910	1150	1750	1080	474	1970	582	4550	480	298	354	239
18	3170	1080	2150	1100	451	1500	556	4330	463	258	314	215
19	2350	920	2520	934	439	1430	610	3590	441	238	288	418
20	1920	811	2200	913	393	1790	799	2720	416	235	269	347
21	1600	769	4030	987	380	1990	765	2150	416	222	251	288
22	1360	768	4150	752	370	2730	679	1730	500	215	251	457
23	1150	773	2810	689	360	2830	638	1450	426	211	239	389
24	995	730	2140	813	370	2810	622	1710	374	205	233	314
25	898	680	2370	915	379	2330	613	1830	346	244	233	290
26	840	1200	2270	7750	367	3490	588	1410	332	256	269	280
27	837	1080	1960	5240	346	9350	572	1250	340	224	227	275
28	735	983	1690	3100	358	6630	547	1120	320	233	440	259
29	653	917	1420	2180	---	4340	520	1020	298	224	396	244
30	597	976	1250	1700	---	3160	502	940	319	219	295	241
31	559	---	1120	1410	---	2430	---	923	---	315	327	---
TOTAL	34658	41343	60336	61515	16576	61658	25196	53677	17190	8620	14046	7989
MEAN	1118	1378	1946	1984	592	1989	840	1732	573	278	453	266
MAX	3910	4140	4150	8760	1200	9350	1960	6630	1360	635	2010	457
MIN	354	512	791	672	346	306	502	437	298	205	227	204
CFSM	3.15	3.88	5.48	5.59	1.67	5.60	2.37	4.88	1.61	.78	1.28	.75
IN.	3.63	4.33	6.32	6.45	1.74	6.46	2.64	5.62	1.80	.90	1.47	.84

CAL YR 1977 TOTAL 325824 MEAN 893 MAX 7650 MIN 145 CFSM 2.52 IN 34.14
WTR YR 1978 TOTAL 402804 MEAN 1104 MAX 9350 MIN 204 CFSM 3.11 IN 42.21

01470500 SCHUYLKILL RIVER AT BERNE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1947 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: October 1963 to September 1973.
WATER TEMPERATURES: February 1948 to September 1953, December 1957 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1947 to current year.

REMARKS.--Unpublished records of specific conductance and pH of sediment samples available in the district office at Harrisburg.

COOPERATION.--Twelve chemical analyses were furnished by the Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,410 micromhos Oct. 25, 26, 28, 1964; minimum daily, 108 micromhos Jan. 27, 1976.
WATER TEMPERATURES: Maximum daily, 33.0°C July 3, 1966; minimum, freezing point on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily, 8,030 mg/L Nov. 4, 1947; minimum daily, 0 mg/L on many days during 1952 and 1968.
SEDIMENT LOADS: Maximum daily, 90,180 tons (81,800 tonnes) Nov. 12, 1947; minimum daily, 0 ton (0 tonne) on many days during 1952 and 1968.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 711 micromhos Sept. 19; minimum daily, 130 micromhos Mar. 27.
WATER TEMPERATURES: Maximum daily, 30.0°C July 23; minimum daily, freezing point Feb. 5, 6, 8.
SEDIMENT CONCENTRATIONS: Maximum daily, 240 mg/L Jan. 9; minimum daily, 1 mg/L Jan. 7, May 3, 8.
SEDIMENT LOADS: Maximum daily, 6,500 tons (5,900 tonnes) Jan. 9; minimum daily, 1.2 tons (1.1 tonnes) May 3, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT									
06...	1430	403	370	6.7	14.5	.0	.0	130	--
NOV									
04...	1015	788	400	7.1	14.0	.0	.0	150	11
DEC									
02...	1030	3090	170	6.7	6.5	.2	10	45	--
JAN									
04...	0915	835	320	7.1	.0	.0	.0	120	8.6
FEB									
01...	1030	1170	290	6.7	1.0	.0	.0	100	11
MAR									
02...	1000	340	520	6.6	1.5	.0	.0	200	20
APR									
11...	1130	806	340	6.8	11.5	.0	.0	130	13
MAY									
05...	0945	501	420	6.9	10.5	.0	.0	130	15
JUN									
06...	1200	549	250	7.8	20.0	.0	.0	140	12
JUL									
17...	1220	301	520	7.5	23.0	.1	5.0	200	15
AUG									
11...	0930	525	255	6.9	22.0	.1	5.0	94	11
SEP									
13...	1040	263	650	7.2	20.0	.0	.0	320	20

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMMER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 12...	1340	9813	9813	807	260	7.8	14.0	10.4	--	90
NOV 15...	1340	9813	9813	1426	220	--	7.0	12.1	--	84
DEC 06...	1330	9813	9813	1656	240	--	4.5	11.1	--	86
JAN 30...	1030	9813	9813	1684	230	--	--	--	--	90
FEB 21...	1120	9813	9813	396	490	--	2.5	13.6	--	192
MAR 13...	1115	9813	9813	455	500	7.5	6.0	10.3	--	200
APR 04...	1125	9813	9813	1348	300	7.0	6.0	10.6	--	98
MAY 30...	1225	9813	9813	925	340	8.0	19.5	9.4	--	166
JUN 19...	1230	9813	9813	440	480	7.6	23.0	8.5	--	160
JUL 19...	1030	9813	9813	233	500	7.7	27.0	8.5	--	198
AUG 22...	1025	9813	9813	245	500	7.6	22.0	8.8	4	671

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT 12...	0	20	21	9.5	9.5	20	70	11	--	22
NOV 15...	0	14	--	13	--	12	72	9.0	<.1	144
DEC 06...	0	16	--	12	--	16	70	13	--	162
JAN 30...	0	16	--	13	--	14	78	13	--	24
FEB 21...	0	39	--	25	--	22	180	21	.1	322
MAR 13...	0	39	--	28	--	32	190	32	--	308
APR 04...	0	20	--	12	--	12	94	12	--	164
MAY 30...	0	24	--	29	--	16	110	12	<.1	240
JUN 19...	0	34	--	20	--	20	120	18	--	372
JUL 19...	0	48	--	21	--	10	170	19	--	406
AUG 22...	0	51	--	186	--	20	200	20	.1	440

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT 12...	--	.20	.04	.27	.09	<10	690	<10	--
NOV 15...	4	1.6	.03	.28	.09	<10	790	<1	<.10
DEC 06...	--	1.6	.04	.24	.09	40	820	<1	--
JAN 30...	22	1.3	.02	.23	.07	<10	818	<10	--
FEB 21...	--	1.7	.02	1.1	.09	20	920	<1	.04
MAR 13...	--	1.7	.03	.77	.20	40	880	1	--
APR 04...	--	1.2	.03	.27	.12	50	900	--	--
MAY 30...	--	1.1	.04	.31	.20	<10	340	0	<.01
JUN 19...	--	3.0	.06	.55	.10	20	240	13	--
JUL 19...	--	2.4	.04	.10	.09	<10	170	5	--
AUG 22...	22	1.3	.03	.15	.07	20	120	<10	.02

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 15...	1340	220	--	<10	50	700	70	80
FEB 21...	1120	100	--	<10	<50	1740	60	150
MAY 30...	1225	80	--	<10	<50	930	10	60
AUG 22...	1025	80	<3	<10	<50	900	20	20

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
JAN 09...	0825	11500	5.0	522	1620	30	45	59
MAY 16...	0825	4290	10.0	42	486	83	84	87

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
JAN 09...	68	74	87	94	98	99	100
MAY 16...	90	94	97	100	--	--	--

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	399	184	288	277	493	253	407	---	520	539	488
2	---	373	165	295	305	546	276	411	348	434	570	504
3	---	364	---	299	336	611	280	414	---	497	551	538
4	---	377	241	304	314	634	296	414	---	459	564	550
5	344	372	217	274	369	606	334	424	---	439	558	573
6	294	380	224	273	366	604	341	312	371	438	552	596
7	373	288	232	280	356	622	345	327	369	445	294	595
8	340	178	140	366	351	589	343	272	351	439	324	595
9	384	163	158	131	369	587	292	410	367	467	227	579
10	363	174	196	149	---	589	357	321	283	458	250	610
11	241	164	179	177	386	600	365	312	293	477	338	630
12	399	172	201	---	368	561	359	385	334	484	364	649
13	263	189	327	228	439	551	368	383	347	501	394	630
14	273	222	240	240	375	487	374	152	366	514	354	627
15	274	220	269	242	424	206	369	---	364	497	386	623
16	238	253	259	---	422	212	399	139	368	467	392	639
17	184	270	220	285	---	243	407	151	388	496	394	660
18	156	279	215	316	483	252	415	157	410	508	434	682
19	201	303	201	328	478	270	386	---	429	505	474	711
20	213	318	251	341	487	264	363	---	437	517	504	621
21	210	---	182	347	484	241	369	208	433	531	515	566
22	---	330	156	360	440	---	368	---	439	546	540	590
23	218	316	189	362	453	191	357	243	451	557	560	583
24	213	332	199	363	497	201	356	255	431	561	566	596
25	214	351	214	289	488	182	360	245	452	555	577	604
26	279	313	---	256	500	---	365	242	470	545	577	622
27	329	271	198	168	520	130	370	259	480	581	582	649
28	---	275	205	186	535	155	383	279	486	594	591	654
29	346	---	---	213	---	184	391	274	488	582	553	654
30	387	269	256	229	---	212	394	287	508	588	519	648
31	403	---	275	242	---	246	---	299	---	536	474	---

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	12.0	7.0	4.0	1.0	2.0	12.0	15.0	---	24.0	20.0	22.0
2	---	12.5	8.0	2.0	2.0	4.0	10.0	16.0	23.0	22.0	21.0	22.0
3	---	13.0	6.5	1.0	2.0	1.0	7.0	16.5	20.0	20.0	24.0	24.0
4	19.0	15.0	6.5	1.0	2.0	2.0	7.0	15.0	20.5	18.0	24.0	25.0
5	16.0	16.0	5.0	1.0	.0	2.0	10.0	11.0	20.0	19.0	23.0	23.0
6	19.0	14.0	4.0	2.0	.0	3.0	10.0	10.0	19.5	22.0	24.0	24.0
7	15.5	10.0	6.0	3.0	.5	4.0	12.0	9.0	19.0	24.0	22.0	24.0
8	17.0	12.0	4.0	5.0	.0	2.0	12.0	10.0	19.0	27.0	23.0	22.0
9	13.0	13.0	4.0	5.0	1.5	3.0	10.0	13.0	20.0	27.0	23.0	21.0
10	14.0	12.0	6.0	1.0	---	4.5	12.0	10.0	19.0	25.0	22.0	19.0
11	14.0	10.0	2.0	1.0	2.0	8.0	11.0	12.0	20.0	23.0	24.0	20.0
12	15.0	8.5	3.0	---	1.5	4.0	13.5	13.0	20.5	24.0	24.0	21.0
13	12.5	7.0	3.0	2.0	2.5	8.0	13.0	13.0	20.5	22.0	24.0	20.0
14	11.0	6.0	6.0	2.5	2.0	6.0	12.0	10.0	15.5	23.0	23.0	20.0
15	10.5	7.5	8.0	1.5	1.0	5.0	10.0	---	15.5	24.0	25.0	19.0
16	11.5	10.0	6.0	1.0	3.0	5.0	11.0	10.0	20.0	25.0	25.0	20.0
17	9.5	10.0	4.0	1.0	---	5.0	11.0	12.0	20.0	23.0	26.0	20.0
18	10.0	8.0	5.0	1.0	2.0	5.0	13.0	13.0	20.0	24.0	25.0	20.0
19	11.0	7.0	4.0	1.5	4.0	6.5	10.0	---	20.5	25.0	25.0	21.0
20	11.0	7.0	4.0	1.5	2.0	7.0	10.5	---	20.5	26.0	25.0	20.0
21	12.0	---	5.0	2.0	3.0	9.0	10.5	18.0	20.5	29.0	24.0	20.0
22	9.0	8.0	4.5	1.0	3.0	---	11.0	---	20.0	29.0	25.0	22.0
23	11.0	7.0	5.0	1.0	3.5	10.0	11.0	10.0	20.5	30.0	25.0	18.0
24	13.0	8.0	5.0	1.0	3.0	10.0	12.0	15.0	20.0	28.0	25.0	19.0
25	13.0	6.5	5.0	1.0	5.0	6.0	12.0	18.0	23.0	25.0	24.0	18.0
26	12.0	6.0	---	3.0	5.0	---	13.0	19.5	24.0	25.0	24.0	17.0
27	15.5	4.0	2.0	1.0	3.0	5.0	13.0	18.0	23.0	29.0	24.0	17.0
28	---	4.5	1.5	2.0	3.5	8.5	16.0	20.0	25.0	25.0	24.0	16.0
29	13.0	---	---	1.0	---	9.0	16.0	20.0	25.0	24.0	25.0	15.0
30	10.0	5.0	2.0	1.5	---	10.0	13.5	21.5	24.0	24.0	23.0	15.0
31	12.0	---	4.0	1.0	---	9.5	---	22.0	---	22.0	24.0	---

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	501	14	31	538	3	4.4	3940	80	1000
2	788	26	55	512	3	4.1	3070	20	166
3	565	10	15	531	4	5.7	2250	13	79
4	485	6	7.9	729	7	14	1770	12	57
5	433	7	8.2	620	2	3.3	1580	11	47
6	425	5	5.7	576	2	3.1	1730	12	56
7	403	8	8.7	2100	31	235	1390	12	45
8	354	4	3.8	3860	48	508	1160	9	28
9	1310	43	252	2990	19	153	1110	8	24
10	1500	22	89	2390	16	103	973	7	18
11	1030	15	42	4140	43	514	932	6	15
12	826	11	25	2900	15	117	959	7	18
13	704	9	17	2190	10	59	791	6	13
14	650	11	19	1730	7	33	1030	12	33
15	1640	29	138	1450	6	23	2000	15	81
16	1470	21	83	1250	6	20	1930	10	52
17	3910	81	876	1150	6	19	1750	9	43
18	3170	53	454	1080	5	15	2150	20	128
19	2350	28	178	920	4	9.9	2520	22	150
20	1920	20	104	811	3	6.6	2200	10	59
21	1600	18	78	769	4	8.3	4030	50	661
22	1360	10	37	768	5	10	4150	27	303
23	1150	6	19	773	4	8.3	2810	11	83
24	995	5	13	730	4	7.9	2140	8	46
25	898	6	15	680	5	9.2	2370	14	90
26	840	8	18	1200	18	58	2270	10	61
27	837	6	14	1080	6	17	1960	6	32
28	735	5	9.9	983	4	11	1690	5	23
29	653	5	8.8	917	4	9.9	1420	6	23
30	597	6	9.7	976	4	11	1250	6	20
31	559	5	7.5	---	---	---	1120	6	18
TOTAL	34658	---	2642.2	41343	---	2000.7	60445	---	3472

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	1010	5	14	1200	9	29	361	6	5.8
2	935	5	13	1070	10	29	351	7	6.6
3	840	5	11	969	9	24	344	8	7.4
4	778	4	8.4	861	8	19	339	7	6.4
5	726	3	5.9	780	8	17	342	6	5.5
6	690	2	3.7	789	8	17	320	8	6.9
7	672	1	1.8	824	7	16	347	9	8.4
8	941	9	46	823	5	11	318	8	6.9
9	8760	240	6500	839	5	11	306	7	5.8
10	5060	53	724	720	5	9.7	311	7	5.9
11	3180	18	155	741	6	12	329	8	7.1
12	2290	9	56	634	4	6.8	385	11	11
13	1850	8	40	538	4	5.8	495	45	60
14	1700	14	64	541	3	4.4	1850	150	1220
15	1370	12	44	503	4	5.4	3620	90	880
16	1150	9	28	481	5	6.5	2860	43	332
17	1080	8	23	474	5	6.4	1970	17	90
18	1100	8	24	451	5	6.1	1500	10	40
19	934	7	18	439	4	4.7	1430	10	39
20	913	8	20	393	4	4.2	1790	15	72
21	987	9	24	470	5	6.3	1990	14	75
22	752	10	20	398	7	7.5	2730	22	162
23	689	10	19	479	6	7.8	2830	16	122
24	813	8	18	413	6	6.7	2810	18	137
25	915	12	45	379	7	7.2	2330	10	63
26	7750	229	5110	367	6	5.9	3490	49	795
27	5240	40	566	346	7	6.5	9350	150	3790
28	3100	16	134	358	6	5.8	6630	52	931
29	2180	9	53	---	---	---	4340	24	281
30	1700	8	37	---	---	---	3160	13	111
31	1410	8	30	---	---	---	2430	10	66
TOTAL	61515	---	13855.8	17280	---	298.7	61658	---	9349.7

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	1960	8	42	478	3	3.9	803	7	15
2	1600	7	30	470	2	2.5	724	6	12
3	1370	6	22	451	1	1.2	691	6	11
4	1340	6	22	438	3	3.5	694	7	13
5	1280	5	17	525	6	8.5	595	5	8.0
6	1090	5	15	516	2	2.8	555	6	9.0
7	1080	5	15	459	2	2.5	550	8	12
8	952	6	15	437	1	1.2	808	18	39
9	860	4	9.3	677	5	9.1	1360	58	316
10	816	5	11	591	5	8.0	1010	19	52
11	807	7	15	540	5	7.3	776	14	29
12	794	8	17	525	7	9.9	677	13	24
13	731	9	18	547	6	8.9	760	14	29
14	680	9	17	5410	175	2800	645	9	16
15	637	8	14	6630	70	1250	558	9	14
16	606	5	8.2	4260	37	426	513	8	11
17	582	5	7.9	4550	28	344	480	8	10
18	556	5	7.5	4330	20	234	463	8	10
19	610	6	9.9	3590	12	116	441	7	8.3
20	799	9	19	2720	10	73	416	8	9.0
21	765	8	17	2150	8	46	416	9	10
22	679	6	11	1730	6	28	500	15	20
23	638	5	8.6	1450	5	20	426	14	16
24	622	6	10	1710	13	60	374	9	9.1
25	613	5	8.3	1830	14	69	346	8	7.5
26	588	6	9.5	1410	8	30	332	8	7.2
27	572	6	9.3	1250	7	24	340	9	8.3
28	547	4	5.9	1120	6	18	320	9	7.8
29	520	2	2.8	1020	5	14	298	8	6.4
30	502	2	2.7	940	6	15	319	9	7.8
31	---	---	---	923	8	20	---	---	---
TOTAL	25196	---	416.9	53677	---	5656.3	17190	---	747.4

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	279	8	6.0	351	11	10	321	8	6.9
2	272	7	5.1	300	10	8.1	269	7	5.1
3	375	15	15	265	7	5.0	239	6	3.9
4	635	18	31	378	8	8.2	227	6	3.7
5	380	10	10	309	9	7.5	215	6	3.5
6	324	6	5.2	287	11	8.5	227	6	3.7
7	295	5	4.0	1030	60	167	221	5	3.0
8	277	4	3.0	2010	60	325	221	6	3.6
9	273	4	2.9	845	27	62	227	6	3.7
10	262	4	2.8	582	13	20	227	6	3.7
11	258	4	2.8	574	10	15	221	7	4.2
12	242	5	3.3	788	16	34	221	7	4.2
13	236	5	3.2	633	11	19	239	7	4.5
14	233	5	3.1	493	9	12	204	7	3.9
15	387	30	31	433	9	11	221	7	4.2
16	295	10	8.0	382	8	8.3	233	6	3.8
17	298	9	7.2	354	8	7.6	239	7	4.5
18	258	8	5.6	314	6	5.1	215	6	3.5
19	238	7	4.5	288	5	3.9	418	21	26
20	235	6	3.8	269	5	3.6	347	11	10
21	222	6	3.6	251	6	4.1	288	7	5.4
22	215	5	2.9	251	5	3.4	457	18	22
23	211	5	2.8	239	6	3.9	389	14	15
24	205	6	3.3	233	5	3.1	314	7	5.9
25	244	13	8.6	233	5	3.1	290	6	4.7
26	256	12	8.3	269	7	5.1	280	5	3.8
27	224	7	4.2	227	6	3.7	275	6	4.5
28	233	6	3.8	440	14	17	259	6	4.2
29	224	6	3.6	396	12	13	244	5	3.3
30	219	5	3.0	295	9	7.2	241	6	3.9
31	315	14	12	327	8	7.1	---	---	---
TOTAL	8620	---	213.6	14046	---	811.5	7989	---	182.3
YEAR	403617		39647.1						

01470500 SCHUYLKILL RIVER AT BERNE, PA--Continued

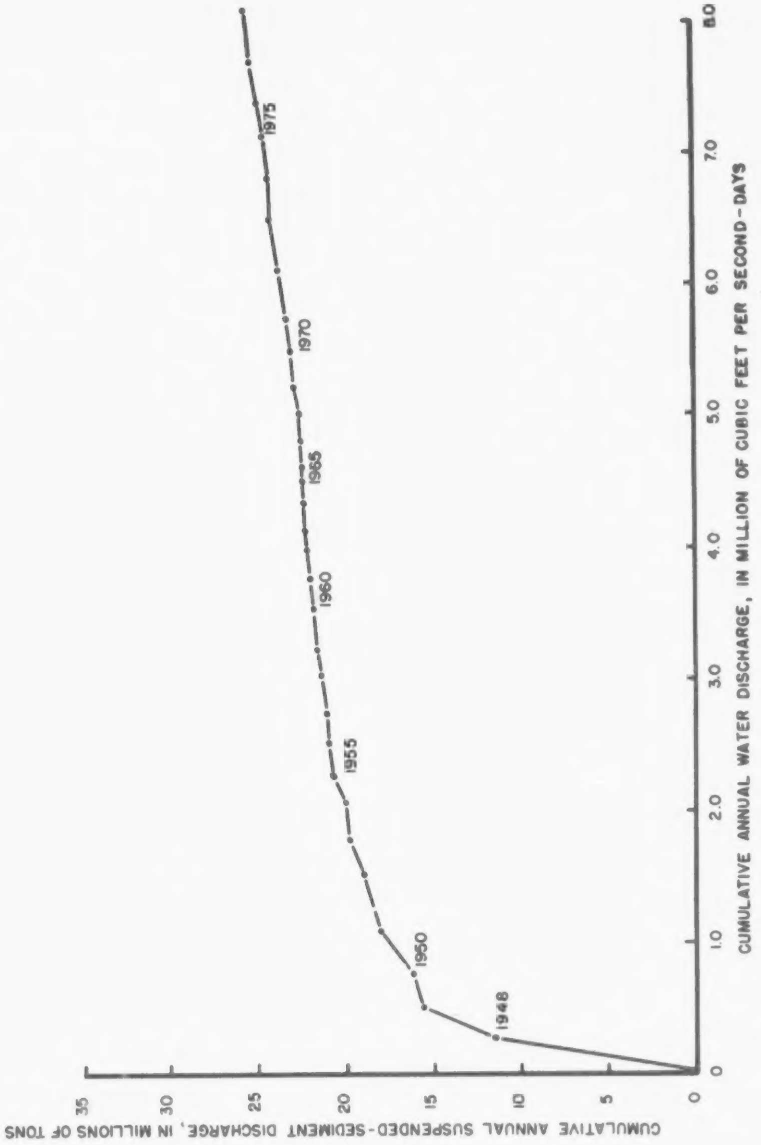

FIGURE 9.—Double mass accumulation of annual suspended-sediment discharge versus annual water discharge Schuylkill River at Berne, Pa

Table 1.--Suspended concentration-duration table, Schuylkill River at Berne, PA

Period	Mean daily concentration, in milligrams per liter that was equaled or exceeded for indicated percentage of time													
	1	2	5	10	20	30	40	50	60	70	80	90	95	99
1978	149	75	46	22	14	10	8	7	6	5	5	4	3	1
1960-78	106	57	28	16	9	7	6	5	4	3	2	2	1	1

01470720 MAIDEN CREEK TRIBUTARY AT LENHARTSVILLE, PA

LOCATION.--Lat 40°34'23", long 75°52'34", Berks County, Hydrologic Unit 02040203, on left bank 60 ft (18 m) downstream from culvert on Interstate Highway 78, 0.5 mi (0.8 km) upstream from mouth, and 0.5 mi (0.8 km) east of Lenhartsville.

DRAINAGE AREA.--7.46 mi^2 (19.3 km^2).

PERIOD OF RECORD.--Annual maximum and occasional discharge measurements, water years 1962-65. October 1965 to current year.

REVISED RECORDS.--WDR PA-72: 1967(M), 1969-71(M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 368.78 ft (112.404 m) above mean sea level. July 12, 1961 to Sept. 15, 1965 crest-stage gage at site 60 ft (18 m) upstream at same datum.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--12 years, 12.1 ft^3/s (0.343 m^3/s), 22.73 in/yr (560 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) June 22, 1972, gage height, 6.46 ft (1.969 m), from peak-stage indicator, from rating curve extended above 280 ft^3/s (7.93 m^3/s) on basis of computation of peak flow through culvert; maximum gage height, 6.7 ft (2.04 m) Feb. 8, 1965, from floodmark; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft^3/s (3.68 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 8	0230	132	3.74	3.44	1.049	Mar. 27	0845	185	5.24	3.66	1.116
Jan. 26	0800	*954	27.0	*5.54	1.689	Aug. 7	Unknown	160	4.53	3.56	1.085
Mar. 14	1615	273	7.73	3.97	1.210						

Minimum discharge, 0.95 ft^3/s (0.027 m^3/s), gage height, 2.26 ft (0.689 m) June 20, July 1, but could have been lower during period of no gage-height record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	5.9	69	12	14	2.2	23	3.8	7.2	1.2	3.3	8.0
2	11	5.9	60	11	12	2.1	17	3.8	6.3	1.2	2.4	6.7
3	10	7.7	47	9.4	8.2	2.1	16	3.5	8.2	12	2.0	5.6
4	8.8	9.4	35	8.1	7.4	2.1	16	3.5	8.2	7.7	2.5	4.9
5	7.7	6.7	38	7.1	6.7	2.0	13	4.8	5.5	5.2	3.0	4.5
6	7.2	6.7	38	6.3	7.2	1.9	11	4.4	4.8	3.8	3.1	4.2
7	5.9	41	36	6.3	8.8	1.8	11	3.5	5.5	3.5	80	3.9
8	5.1	101	30	22	5.9	1.7	8.2	4.8	5.9	2.8	35	3.8
9	37	73	27	87	5.5	2.1	7.7	17	4.1	2.4	25	3.7
10	41	59	22	63	5.5	3.3	7.2	9.4	2.5	2.2	18	3.5
11	31	60	18	42	5.1	6.3	7.2	7.2	2.1	2.1	14	3.7
12	23	50	15	30	4.1	12	7.2	6.3	2.1	1.9	12	4.5
13	17	38	12	24	3.8	32	6.3	6.7	2.7	1.6	11	5.5
14	20	28	27	24	4.1	98	5.5	42	1.9	1.4	9.6	3.7
15	27	22	35	17	3.5	100	5.1	40	1.7	8.4	8.7	4.0
16	37	18	38	13	3.5	58	4.8	43	1.7	3.5	7.4	4.2
17	78	19	35	11	3.3	34	4.8	52	1.7	2.2	6.7	4.3
18	56	15	53	17	3.0	25	4.4	53	1.7	1.8	6.0	3.7
19	46	11	74	13	2.8	41	7.7	44	1.4	1.6	5.6	12
20	35	10	68	10	2.7	42	15	33	1.2	1.5	5.1	8.0
21	29	10	79	13	3.0	42	9.4	26	5.8	1.4	4.8	5.6
22	24	9.4	78	8.8	3.5	42	7.7	20	3.8	1.3	4.4	7.3
23	18	13	56	11	3.0	36	7.2	16	2.1	1.2	4.1	6.2
24	15	11	39	12	2.5	33	6.7	28	1.9	1.2	3.9	5.0
25	12	12	41	41	2.5	26	6.3	20	1.9	1.1	3.7	4.8
26	14	38	30	325	2.8	63	5.9	16	1.9	1.3	3.6	4.7
27	12	37	27	81	2.3	143	5.5	15	2.1	1.2	3.5	4.3
28	8.8	31	23	46	2.2	100	5.1	13	1.5	2.0	8.4	3.9
29	7.7	25	18	29	---	59	4.4	11	1.4	1.4	10	3.5
30	6.7	28	16	21	---	38	4.1	10	1.5	1.3	4.5	3.3
31	6.3	---	14	18	---	29	---	8.8	---	5.0	6.2	---
TOTAL	670.2	801.7	1198	1039.0	138.9	1080.6	260.4	569.5	100.3	86.4	317.5	151.0
MEAN	21.6	26.7	38.6	33.5	4.96	34.9	8.68	18.4	3.34	2.79	10.2	5.03
MAX	78	101	79	325	14	143	23	53	8.2	12	80	12
MIN	5.1	5.9	12	6.3	2.2	1.7	4.1	3.5	1.2	1.1	2.0	3.3
CFSM	2.90	3.58	5.17	4.49	.67	4.68	1.16	2.47	.45	.37	1.37	.67
IN.	3.34	4.00	5.97	5.18	.69	5.39	1.30	2.84	.50	.43	1.58	.75

CAL YR 1977 TOTAL 5382.34 MEAN 14.7 MAX 101 MIN .30 CFSM 1.97 IN 26.84
WTR YR 1978 TOTAL 6413.50 MEAN 17.6 MAX 325 MIN 1.1 CFSM 2.36 IN 31.98

01470756 MAIDEN CREEK AT VIRGINVILLE, PA

LOCATION.--Lat 40°30'51", long 75°53'00", Berks County, Hydrologic Unit 02040203, on right bank 0.9 mi (1.4 km) downstream from Sacony Creek, 0.9 mi (1.4 km) southwest of Virginville, and 1.0 mi (1.6 km) upstream from Moselem Creek.

DRAINAGE AREA.--159 mi² (412 km²).

PERIOD OF RECORD.--January 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 310 ft (94.5 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair.

AVERAGE DISCHARGE.--5 years, 302 ft³/s (8.553 m³/s), 25.79 in/yr. (655 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,060 ft³/s (200 m³/s) Jan. 26, 1976, gage height, 11.51 ft (3.508 m); minimum, 26 ft³/s (0.74 m³/s) Sept. 9, 10, 15, 16, 1976; minimum gage height, 1.98 ft (0.604 m) July 19, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of 17.2 feet (5.24 m), from floodmarks, discharge, about 17,000 ft³/s (481 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 17	0900	2,170	61.5	5.96	1.817	Feb. 7				ice jam	
Nov. 8	1145	3,590	102	7.76	2.365	Mar. 14	2230	3,800	108	8.02	2.444
Dec. 1	0900	2,440	69.1	6.32	1.926	Mar. 15	2000	2,890	81.8	6.89	2.100
Dec. 21	1845	2,720	77.0	6.67	2.033	Mar. 27	1515	3,520	99.7	7.68	2.341
Jan. 9	1130	3,720	105	7.92	2.414	May 14	1800	2,020	57.2	5.74	1.750
Jan. 26	1415	*6,530	185	*10.93	3.331	Aug. 8	0315	2,880	81.6	6.87	2.094

Minimum discharge, 54 ft³/s (1.53 m³/s) July 25, gage height, 2.11 ft (0.643 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	143	1880	303	280	89	513	133	192	69	111	175
2	366	138	1270	285	235	88	410	127	173	64	83	107
3	218	143	845	240	200	87	353	124	177	180	72	93
4	172	261	625	210	185	86	368	121	228	285	86	85
5	141	192	642	200	170	85	340	148	160	136	99	78
6	126	176	811	210	160	84	284	147	143	110	105	73
7	115	1020	634	213	190	84	291	131	142	97	972	70
8	101	2890	507	417	140	83	249	128	181	89	1880	70
9	730	1560	468	2800	135	83	223	299	155	84	740	73
10	757	977	370	1400	130	92	212	187	134	82	433	63
11	454	1260	320	802	125	114	205	161	118	82	341	63
12	316	841	300	566	120	183	208	150	111	72	313	83
13	241	630	290	475	115	452	189	155	130	69	239	101
14	238	512	513	519	115	1560	176	1040	117	67	191	66
15	597	429	999	381	115	2500	165	979	101	202	163	70
16	501	369	799	327	120	1360	158	795	96	116	149	75
17	1790	372	640	286	105	676	155	1320	96	132	135	80
18	977	386	1100	414	100	488	151	1190	96	102	121	66
19	742	291	1750	325	100	685	187	893	94	79	112	254
20	551	260	1390	263	98	855	360	647	87	78	106	147
21	422	252	2100	448	96	818	244	495	100	73	96	112
22	342	256	1950	255	95	996	209	384	143	69	91	150
23	282	305	1150	235	94	822	191	320	102	66	87	118
24	242	285	804	250	92	748	183	584	86	61	83	98
25	214	267	916	555	91	567	176	569	81	60	80	98
26	217	776	661	4600	100	1120	167	391	77	67	81	101
27	252	662	540	2060	92	3310	161	333	85	63	78	96
28	196	545	458	984	90	2190	154	295	77	84	155	85
29	173	450	402	620	---	1300	145	263	69	66	215	63
30	160	480	355	461	---	837	140	237	86	63	104	61
31	150	---	332	361	---	627	---	211	---	117	138	---
TOTAL	11977	17128	25821	21465	3688	23069	6967	12957	3637	2984	7659	2874
MEAN	386	571	833	692	132	744	232	418	121	96.3	247	95.8
MAX	1790	2890	2100	4600	280	3310	513	1320	228	285	1880	254
MIN	101	138	290	200	90	83	140	121	69	60	72	61
CFSM	2.43	3.59	5.24	4.35	.83	4.68	1.46	2.63	.76	.61	1.55	.60
IN.	2.80	4.01	6.04	5.02	.86	5.40	1.63	3.03	.85	.70	1.79	.67

CAL YR 1977 TOTAL 116109 MEAN 318 MAX 2890 MIN 26 CFSM 2.00 IN 27.16
WTR YR 1978 TOTAL 140226 MEAN 384 MAX 4600 MIN 60 CFSM 2.42 IN 32.81

01470764 MAIDEN CREEK NEAR LEESPORT, PA

LOCATION.--Lat 40°25'28", long 75°56'53", Berks County, Hydrologic Unit 02040203, 220 ft (67 m) upstream from Reading Railroad Bridge, 600 ft (183 m) upstream from Schuylkill River, 0.5 mi (0.8 km) downstream from Willow Creek and 1.9 mi (3.1 km) southeast of Leesport.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--January 1976 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
OCT 12...	1305	9813	9813	240	8.2	14.0	10.2	85	0	24	25	5.8
NOV 15...	1310	9813	9813	200	--	8.5	11.2	80	0	20	--	8.3
DEC 06...	1300	9813	9813	250	--	5.0	11.7	88	0	24	--	7.7
JAN 30...	1110	9813	9813	200	--	--	--	84	0	22	--	7.7
FEB 21...	1045	9813	9813	300	--	2.0	13.4	112	0	32	--	8.8
MAR 13...	1040	9813	9813	300	8.2	4.0	12.4	116	0	35	--	7.7
APR 04...	1050	9813	9813	--	8.2	8.0	10.2	90	0	23	--	8.8
MAY 30...	1055	9813	9813	240	8.8	19.5	9.1	92	0	24	--	8.2
JUN 19...	1140	9813	9813	290	7.9	20.0	7.7	98	0	31	--	11
JUL 19...	1030	9813	9813	290	7.9	21.5	7.7	113	0	30	--	10
AUG 22...	0900	9813	9813	290	7.7	19.5	6.8	96	0	31	--	4.5

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 12...	5.8	72	18	12	<10	.20	.04	.07	.10	10	520
NOV 15...	--	48	24	9.0	152	3.5	.04	.15	.11	--	470
DEC 06...	--	56	26	10	128	3.3	.05	.10	.14	20	600
JAN 30...	--	58	20	11	102	3.3	.03	.20	.10	20	1606
FEB 21...	--	98	18	12	202	4.1	.03	.19	.06	<10	100
MAR 13...	--	94	20	14	154	4.1	.04	.22	.07	10	110
APR 04...	--	64	28	14	226	3.7	.04	.19	.15	10	630
MAY 30...	--	70	20	11	178	2.6	.04	.15	.10	<10	230
JUN 19...	--	98	30	13	202	3.2	.06	.22	.25	20	380
JUL 19...	--	96	20	12	186	2.4	.04	.18	.10	<10	210
AUG 22...	--	86	15	12	206	1.8	.05	.15	.10	<10	110

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
AUG 22...	0900	<3	<10	<50	150	<10	10

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA

LOCATION.--Lat 40°24'48", long 76°10'19", Berks County, Hydrologic Unit 02040203, on left bank 30 ft (9.1 m) downstream from Kricks Mill Bridge, 0.4 mi (0.6 km) upstream from Mill Creek, and 3.5 mi (5.6 km) west of Bernville.

DRAINAGE AREA.--66.5 mi² (172.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 311.26 ft (94.872 m) Pennsylvania Department of Transportation Datum.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,830 ft³/s (108 m³/s) Jan. 26, 1978, gage height, 8.63 ft (2.630 m), from rating curve extended above 740 ft³/s (21 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 31 ft³/s (0.878 m³/s) Feb. 6, 1977, gage height, 1.59 ft (0.485 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1972 reached a stage of about 9.5 ft (2.9 m), from information by local resident, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 950 ft³/s (26.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 21	1445	1,220	34.6	5.33	1.625	Mar. 14	2015	1,950	55.2	6.47	1.972
Jan. 26	1100	*3,830	108	*8.63	2.630	Mar. 26	2400	2,080	58.9	6.64	2.024

Minimum discharge, 51 ft³/s (1.44 m³/s) Oct. 8, gage height, 1.80 ft (0.549 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	70	313	166	205	93	283	108	139	85	80	90
2	78	69	209	161	191	91	252	106	135	79	73	85
3	60	71	187	152	181	93	237	104	135	121	71	83
4	56	81	171	145	171	90	234	105	134	109	87	71
5	54	82	194	137	163	87	211	114	119	88	81	68
6	55	83	232	127	161	85	195	119	114	81	94	67
7	54	166	181	125	138	84	198	109	114	78	285	67
8	52	130	165	187	147	83	187	106	120	86	329	68
9	141	113	163	568	140	83	177	129	111	89	135	67
10	102	126	147	243	140	84	172	108	105	109	121	64
11	81	246	129	211	142	88	168	102	101	103	109	64
12	75	162	123	193	142	105	164	100	100	84	103	63
13	70	148	122	188	140	169	151	100	123	74	111	57
14	74	136	171	206	135	770	140	217	115	73	95	61
15	212	118	202	167	117	882	138	218	108	134	91	71
16	131	110	156	151	114	475	140	203	94	90	93	68
17	171	113	156	150	113	292	136	232	93	88	87	69
18	136	114	390	171	111	264	139	223	87	90	83	59
19	130	108	335	153	109	372	158	208	85	88	81	56
20	120	107	277	137	106	359	174	189	91	87	90	63
21	103	105	893	158	105	329	148	176	92	83	90	66
22	92	95	483	147	101	319	140	165	104	82	85	66
23	87	115	346	141	100	268	133	159	98	72	75	64
24	83	113	292	125	98	287	126	223	95	72	73	68
25	81	110	314	238	111	227	123	202	81	73	72	59
26	82	162	236	2140	111	676	120	170	80	71	71	56
27	82	121	203	869	106	1460	118	161	83	69	87	55
28	77	118	193	459	94	708	115	144	78	71	140	55
29	82	115	185	346	---	467	112	139	76	77	91	53
30	86	123	176	266	---	363	110	135	87	80	78	53
31	82	---	172	227	---	314	---	130	---	95	93	---
TOTAL	2859	3530	7516	8854	3692	10067	4899	4704	3089	2681	3254	1948
MEAN	92.2	118	242	286	132	325	163	152	103	86.5	105	64.9
MAX	212	246	893	2140	205	1460	283	232	139	134	329	90
MIN	52	69	122	125	94	83	110	100	76	69	71	53
CFSM	1.39	1.77	3.64	4.30	1.99	4.89	2.45	2.29	1.55	1.30	1.58	.98
IN.	1.60	1.97	4.20	4.95	2.07	5.63	2.74	2.63	1.73	1.50	1.82	1.09

CAL YR 1977 TOTAL 39809 MEAN 109 MAX 893 MIN 42 CFSM 1.64 IN 22.27
WTR YR 1978 TOTAL 57093 MEAN 156 MAX 2140 MIN 52 CFSM 2.35 IN 31.94

0470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1977 to current year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	12.0	9.0	10.5	---	---	---	7.0	6.5	7.0
2	---	---	---	13.0	12.0	12.5	---	---	---	7.0	6.0	6.5
3	---	---	---	---	---	---	---	---	---	6.5	5.0	5.5
4	---	---	---	---	---	---	---	---	---	6.5	4.0	5.0
5	---	---	---	---	---	---	---	---	---	7.0	5.0	6.0
6	---	---	---	---	---	---	---	---	---	7.5	6.5	7.0
7	---	---	---	---	---	---	---	---	---	7.5	7.0	7.0
8	---	---	---	---	---	---	---	---	---	8.0	7.0	7.0
9	---	---	---	---	---	---	---	---	---	8.5	7.0	8.0
10	---	---	---	---	---	---	---	---	---	7.0	3.0	4.5
11	---	---	---	---	---	---	---	---	---	5.0	2.5	4.0
12	---	---	---	---	---	---	---	---	---	5.5	3.5	4.5
13	---	---	---	---	---	---	---	---	---	5.5	4.0	5.0
14	---	---	---	---	---	---	---	---	---	5.5	4.0	5.0
15	---	---	---	---	---	---	---	---	---	4.5	3.5	4.0
16	---	---	---	---	---	---	---	---	---	4.0	2.5	3.5
17	---	---	---	---	---	---	---	---	---	4.0	2.0	3.0
18	---	---	---	---	---	---	---	---	---	4.0	2.0	3.0
19	---	---	---	---	---	---	---	---	---	3.0	2.0	2.5
20	---	---	---	---	---	---	---	---	---	2.5	.0	1.5
21	12.5	10.5	12.0	---	---	---	---	---	---	2.0	2.0	2.0
22	12.5	10.5	12.0	---	---	---	---	---	---	2.5	2.0	2.0
23	12.5	11.0	12.0	---	---	---	---	---	---	2.5	2.0	2.0
24	12.0	10.0	11.0	---	---	---	---	---	---	2.5	2.0	2.0
25	12.5	10.0	11.0	---	---	---	---	---	---	3.0	2.0	2.5
26	12.5	12.0	12.0	---	---	---	---	---	---	3.0	.0	.5
27	15.0	12.5	13.5	---	---	---	---	---	---	1.5	.0	.5
28	15.5	14.0	15.0	---	---	---	7.0	6.0	6.5	2.0	1.5	2.0
29	14.0	12.0	12.5	---	---	---	7.0	5.5	6.0	2.0	1.5	2.0
30	12.0	10.0	11.0	---	---	---	7.0	6.5	7.0	3.0	1.5	2.0
31	11.0	9.0	10.0	---	---	---	7.5	7.0	7.5	2.5	2.0	2.0
MONTH	15.5	9.0	12.0	13.0	9.0	11.5	7.5	5.5	7.0	8.5	.0	4.0

01470779 TULPEHOCKEN CREEK NEAR BERNVILLE, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	1.5	2.5	---	---	---	12.5	9.0	11.0	12.5	11.0	12.0
2	3.5	2.5	3.0	---	---	---	12.5	9.5	10.5	13.0	11.0	12.0
3	4.0	3.0	3.5	---	---	---	10.0	8.0	8.5	13.5	12.0	13.0
4	3.5	2.0	2.5	---	---	---	10.5	8.0	9.0	13.5	11.0	12.0
5	2.5	1.5	2.0	---	---	---	12.5	10.0	11.5	11.0	10.0	10.0
6	2.0	.5	1.5	---	---	---	12.0	9.5	10.0	11.0	10.0	10.5
7	2.5	.5	1.5	---	---	---	13.0	9.0	11.0	13.0	11.0	12.0
8	4.0	2.0	3.0	---	---	---	13.0	10.5	12.0	12.5	11.5	12.0
9	3.5	1.5	2.5	---	---	---	12.0	9.0	11.0	14.0	11.5	12.5
10	3.5	1.5	2.5	---	---	---	11.5	9.5	10.5	13.5	12.5	13.0
11	4.0	2.0	3.0	---	---	---	11.0	10.0	10.5	14.5	12.0	13.0
12	5.0	3.5	4.5	---	---	---	12.0	10.5	11.0	15.0	13.5	14.0
13	4.5	3.5	4.0	---	---	---	12.5	11.0	11.5	14.5	14.0	14.0
14	---	---	---	---	---	---	12.0	11.0	11.0	14.0	13.0	13.5
15	---	---	---	---	---	---	11.0	9.5	10.5	13.0	12.0	12.5
16	---	---	---	---	---	---	10.5	9.5	10.0	12.0	12.0	12.0
17	---	---	---	---	---	---	11.5	9.5	10.5	12.0	12.0	12.0
18	---	---	---	---	---	---	12.0	10.0	11.0	13.0	12.0	12.5
19	---	---	---	---	---	---	11.5	10.0	10.5	15.5	12.5	13.5
20	---	---	---	---	---	---	11.0	10.0	10.5	16.5	13.5	15.0
21	---	---	---	9.5	8.0	9.0	11.0	10.5	10.5	16.5	14.5	15.5
22	---	---	---	9.5	7.5	8.5	12.0	9.5	11.0	16.5	13.5	15.0
23	---	---	---	10.0	8.0	9.0	12.5	10.0	11.5	16.0	14.0	15.0
24	---	---	---	10.0	9.0	9.5	12.0	11.5	11.5	16.0	13.0	14.5
25	---	---	---	9.0	6.5	7.0	12.5	10.5	11.5	17.5	13.0	15.0
26	---	---	---	6.5	3.5	5.0	12.5	11.5	12.0	19.5	15.5	17.5
27	---	---	---	9.0	3.5	6.5	12.0	11.0	11.5	19.0	16.5	17.5
28	---	---	---	11.0	7.5	9.0	13.0	11.0	12.0	20.0	17.0	18.0
29	---	---	---	11.5	8.5	10.0	13.0	11.0	12.5	20.0	17.0	18.5
30	---	---	---	11.0	7.5	9.5	13.5	12.5	13.0	20.5	17.0	19.0
31	---	---	---	11.0	8.0	10.0	---	---	---	20.5	18.5	19.5
MONTH	5.0	.5	3.0	11.5	3.5	8.5	13.5	8.0	11.0	20.5	10.0	14.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.0	17.5	19.5	20.5	19.0	20.0	---	---	---	19.5	18.5	19.0
2	21.0	18.5	20.0	20.0	17.5	18.5	---	---	---	19.0	18.0	18.5
3	21.0	17.0	18.5	17.5	15.5	16.5	---	---	---	19.0	18.0	18.5
4	19.0	14.5	16.5	16.5	15.5	16.0	---	---	---	19.5	18.5	19.0
5	18.5	16.5	17.0	19.5	15.5	17.0	---	---	---	19.5	18.0	18.5
6	---	---	---	21.5	19.0	20.0	---	---	---	20.0	18.5	19.5
7	---	---	---	22.5	20.5	21.5	22.0	21.0	21.5	21.0	19.5	20.0
8	---	---	---	23.0	21.0	22.5	22.0	19.5	21.0	20.5	17.0	19.0
9	---	---	---	24.0	21.5	23.0	21.0	18.5	20.0	18.5	16.0	17.0
10	---	---	---	24.0	22.0	23.0	20.5	19.0	20.0	17.5	16.5	17.0
11	---	---	---	---	---	---	20.5	17.0	18.0	19.0	17.0	18.0
12	---	---	---	---	---	---	17.5	17.0	17.0	20.0	19.0	19.5
13	---	---	---	---	---	---	18.5	17.0	17.5	20.0	18.0	19.0
14	---	---	---	---	---	---	19.0	17.5	18.0	18.0	17.0	17.5
15	---	---	---	---	---	---	19.5	18.0	18.5	17.5	17.0	17.0
16	---	---	---	---	---	---	19.0	18.0	18.5	19.0	17.0	17.5
17	---	---	---	---	---	---	20.0	18.5	19.5	19.0	17.5	18.5
18	---	---	---	---	---	---	20.0	19.0	19.5	20.5	18.0	19.0
19	---	---	---	---	---	---	20.0	18.5	19.0	21.0	19.0	20.0
20	---	---	---	24.5	23.0	23.5	20.0	19.0	19.5	20.5	18.0	19.0
21	---	---	---	23.5	21.0	22.5	19.5	18.0	18.5	19.5	18.5	19.0
22	17.5	17.0	17.0	24.0	22.0	23.5	19.0	17.5	18.5	19.5	18.5	19.0
23	17.5	16.5	17.0	25.0	23.0	24.0	19.0	18.0	18.5	18.5	17.0	17.5
24	18.0	16.5	17.5	24.5	23.5	24.0	19.5	18.0	19.0	17.5	16.0	17.0
25	18.0	17.0	17.5	23.5	19.5	21.5	19.5	19.0	19.5	18.0	16.5	17.0
26	18.5	17.5	17.5	20.5	18.5	20.0	19.5	18.5	19.0	17.0	15.5	16.5
27	20.0	17.5	18.5	---	---	---	19.5	18.5	19.0	---	---	---
28	21.0	19.5	20.0	---	---	---	20.5	18.5	19.0	---	---	---
29	21.0	19.5	20.5	---	---	---	20.5	19.0	19.5	---	---	---
30	22.5	19.5	20.5	---	---	---	20.5	19.5	20.0	---	---	---
31	---	---	---	---	---	---	19.5	19.0	19.0	---	---	---
MONTH	22.5	14.5	18.5	25.0	15.5	21.0	22.0	17.0	19.0	21.0	15.5	18.5

01470800 TULPEHOCKEN CREEK AT BERNVILLE, PA

LOCATION.--Lat 40°25'32", long 75°06'51", Berks County, Hydrologic Unit 02040203, at single-span concrete bridge on Legislative Route 06074, 0.5 mi (0.8 km) south of Bernville, and 600 ft (183 m) above confluence with Northkill Creek.

DRAINAGE AREA.--84.8 mi² (220 km²).

PERIOD OF RECORD.--June 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA-LINITY (MG/L AS CACO3)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
12...	1035	460	7.9	17.5	10.2	K11000	2700	K12000	160	5.0
NOV										
08...	1000	420	7.7	12.0	10.2	K56000	>6000	>250000	138	4.1
DEC										
23...	1155	347	7.7	5.5	--	K1500	900	33000	135	6.2
FEB										
01...	1200	467	7.8	.0	14.1	950	150	2400	158	6.2
22...	1030	472	8.0	.0	15.5	147	K10	210	168	6.1
MAR										
14...	2130	195	7.1	--	--	--	--	--	--	1.8
15...	0930	260	7.7	--	--	--	--	--	--	2.7
22...	1145	327	8.0	8.0	12.2	5700	200	10000	121	4.3
APR										
12...	1010	495	8.1	11.0	12.2	1100	K27	K4	162	5.5
MAY										
16...	1030	400	7.5	11.5	9.3	23000	K8600	K89000	104	4.4
JUN										
21...	1000	465	7.8	21.0	--	10000	1200	5300	180	5.4
JUL										
12...	1000	460	7.8	18.0	9.8	K18000	K4000	1600	160	5.3
AUG										
09...	0930	360	7.6	20.5	6.1	26000	4300	17000	140	4.8
SEP										
20...	1000	385	8.0	18.0	9.2	12000	1700	1900	180	5.4

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
12...	.04	5.0	.03	.28	.31	5.3	.05	.05	7.5
NOV									
08...	.05	4.1	.11	.89	1.0	5.1	.19	.09	11
DEC									
23...	.04	6.2	.06	.40	.46	6.7	.13	.04	11
FEB									
01...	.01	6.2	.07	.16	.23	6.4	.06	.02	.6
22...	.02	6.1	.05	.06	.11	6.2	.03	.02	2.1
MAR									
14...	.05	1.8	.58	2.1	2.7	4.5	.42	.12	--
15...	.06	2.8	1.2	2.1	3.3	6.1	.59	.25	--
22...	.03	4.3	.16	.58	.74	5.0	.13	.04	3.2
APR									
12...	.02	5.5	.03	.21	.24	5.7	.06	.05	7.6
MAY									
16...	.05	4.4	.20	.50	.70	5.1	.13	.08	12
JUN									
21...	.10	5.5	.03	.50	.53	6.0	.11	.05	11
JUL									
12...	.04	5.3	.02	.39	.41	5.7	.14	.07	6.0
AUG									
09...	.05	4.8	.04	.91	.95	5.8	.16	.07	4.0
SEP									
20...	.04	5.4	.05	.46	.51	5.9	.07	.05	1.2

01470800 TULPEHOCKEN CREEK AT BERNVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
JUN										
21...	1000	4.2	19	11000	750	3	10	10	10	170

DATE	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN										
21...	26000	10	1300	.0	10	80	22	5.0	49	.0

DATE	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN										
21...	6	.0	.0	.0	1.2	.0	.0	.0	.0	0

01470825 NORTHKILL CREEK AT BERNVILLE, PA

LOCATION.--Lat 40°25'50", long 76°06'51", Berks County, Hydrologic Unit 02040203, at a retaining wall 670 ft (204 m) upstream from highway bridge on county road 0.2 mi (0.3 km) from Bernville, and 0.4 mi (0.6 km) from mouth.

DRAINAGE AREA.--42.0 mi² (109 km²).

PERIOD OF RECORD.--June 1972 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA-LINITY (MG/L AS CACO3)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT										
12...	1050	150	7.2	17.0	11.2	K11000	1000	3800	26	3.4
NOV										
08...	0945	132	7.0	12.0	10.2	34000	>6000	>100000	22	2.5
FEB										
01...	1120	121	7.0	.0	14.6	2000	640	760	21	3.4
22...	1100	150	7.1	.0	--	K15000	230	620	36	2.2
MAR										
14...	2136	105	6.8	--	--	--	--	--	--	1.5
15...	0945	119	7.0	--	--	--	--	--	--	2.4
22...	1150	99	7.2	6.0	13.4	12000	3900	5800	14	2.0
APR										
12...	1020	140	7.9	11.5	12.0	K60	K3	<1	40	1.8
MAY										
16...	1040	120	7.7	11.0	10.1	8400	K30	4500	20	2.2
JUN										
21...	1010	175	7.3	21.0	7.4	26000	530	K160	56	1.5
AUG										
09...	0945	125	7.4	15.0	12.0	14000	900	1100	26	2.8
SEP										
20...	0945	150	7.3	18.0	9.0	43000	4400	4200	50	1.5

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
12...	.01	3.4	.01	.45	.46	3.9	.10	.01	8.1
NOV									
08...	.01	2.5	.03	.70	.73	3.2	.09	.02	12
FEB									
01...	.01	3.4	.02	.06	.08	3.5	.02	.01	.4
22...	.02	2.2	.15	.20	.35	2.6	.07	.04	.6
MAR									
14...	.06	1.6	1.6	7.0	8.6	10	1.5	.30	--
15...	.02	2.4	.31	.79	1.1	3.5	.13	.05	--
22...	.01	2.0	.08	.44	.52	2.5	.06	.03	2.6
APR									
12...	.01	1.8	.07	.26	.33	2.1	.03	.03	5.4
MAY									
16...	.01	2.2	.03	.36	.39	2.6	.04	.02	11
JUN									
21...	.05	1.5	.13	.24	.37	1.9	.14	.09	13
AUG									
09...	.02	2.8	.03	.58	.61	3.4	.06	.02	4.5
SEP									
20...	.03	1.5	.08	3.0	3.1	4.6	.08	.05	3.6

01470825 NORTHKILL CREEK AT BERNVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
JUN 21...	1010	3.4	4.7	1400	240	1	10	10	10	130

DATE	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN 21...	15000	10	980	.1	10	60	3.5	.1	24	.0

DATE	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN 21...	0	.0	.0	.0	.5	.0	.0	.0	.0	0

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA

LOCATION.--Lat 40°22'14", long 76°01'32", Berks County, Hydrologic Unit 02040203, on right bank 1 mi (1.6 km) upstream from Rebers Bridge and Plum Creek, 1 mi (1.6 km) east of Blue Marsh, 3 mi (4.8 km) north of Sinking Spring, and 5.5 mi (8.8 km) northwest of Reading. Water-quality sampling site at Rebers Bridge 1.0 mi (1.6 km) downstream.

DRAINAGE AREA.--175 mi² (453 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1965 to current year.

REVISED RECORDS.--WDR PA-72: 1969-1971 (M).

GAGE.--Water-stage recorder. Datum of gage is 230.06 ft (70.122 m) Western Berks Water Authority datum. Prior to Nov. 25, 1974, water-stage recorder at site 0.3 mi (0.5 km) down stream at same datum.

REMARKS.--Records are fair. Flow affected by construction of Blue Marsh Dam 0.8 mi (1.3 km) upstream.

AVERAGE DISCHARGE.--13 years, 283 ft³/s (8.015 m³/s),21.96 in/yr (558 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s (456 m³/s) June 22, 1972, gage height, 18.7 ft (5.70 m), from floodmarks, from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of runoff comparison with downstream station; minimum since construction of dam, 5.8 ft³/s (0.16 m³/s) Nov. 17, 1977; minimum gage height, 1.45 ft (0.442 m) July 29, 30, 31, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,640 ft³/s (74.8 m³/s) Jan. 26, gage height, 6.38 ft (1.945 mi); minimum discharge, 5.8 ft³/s (0.16 m³/s) Nov. 17; minimum gage height, 2.29 ft (0.698 m) Nov. 17, Feb. 23 when gates were closed on dam upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	127	975	418	1840	169	1100	185	271	163	163	303
2	208	116	1050	399	961	160	911	179	263	154	139	163
3	145	121	823	369	493	160	752	175	255	202	121	148
4	113	192	666	369	423	163	648	172	303	395	139	130
5	100	169	585	315	423	157	579	215	240	212	156	116
6	98	157	810	299	418	157	462	205	226	157	156	108
7	98	404	708	287	350	145	443	195	226	133	444	103
8	84	708	579	336	400	145	428	179	279	127	911	105
9	283	619	525	1490	349	139	390	315	233	139	703	113
10	546	473	443	1480	354	145	414	240	212	133	493	95
11	307	1020	448	1090	363	154	418	208	202	205	361	98
12	248	817	423	797	307	192	332	195	192	154	414	98
13	202	602	341	568	291	367	299	195	233	116	366	100
14	188	448	376	660	287	823	267	613	237	110	301	84
15	628	367	817	525	252	1710	252	932	205	315	246	105
16	535	311	660	414	233	1690	248	771	188	283	212	113
17	684	311	552	395	233	1280	240	904	182	226	192	110
18	546	395	696	401	222	1030	233	898	195	175	172	98
19	448	315	1310	421	212	863	279	771	179	157	157	121
20	390	291	1240	308	202	954	376	613	182	142	150	102
21	319	279	1570	400	212	946	303	519	182	133	145	100
22	263	279	1960	350	195	989	263	438	226	121	141	100
23	237	307	1770	339	182	961	252	376	208	113	133	98
24	205	324	1420	326	188	918	237	488	195	100	122	93
25	185	303	1120	494	185	843	230	608	182	95	129	88
26	175	525	939	1100	192	850	226	433	160	108	220	86
27	198	483	721	903	185	2010	215	376	179	103	123	84
28	169	428	608	2250	169	2350	208	345	166	108	375	84
29	154	390	590	2040	---	2120	198	319	154	98	399	79
30	151	395	468	1740	---	1800	192	303	157	95	188	79
31	139	---	443	2280	---	1400	---	283	---	121	222	---
TOTAL	8164	11676	25636	23683	10121	25790	11395	12648	6312	4893	8193	3304
MEAN	263	389	827	761	361	832	380	408	210	158	264	110
MAX	684	1020	1960	2280	1840	2350	1100	932	303	395	911	303
MIN	84	116	341	287	169	139	192	172	154	95	121	79
CFSM	1.50	2.22	4.73	4.35	2.06	4.75	2.17	2.33	1.20	.90	1.51	.63
IN.	1.74	2.48	5.45	5.02	2.15	5.48	2.42	2.69	1.34	1.04	1.74	.70

CAL YR 1977 TOTAL 109430 MEAN 300 MAX 1960 MIN 25 CFSM 1.71 IN 23.26
WTR YR 1978 TOTAL 151735 MEAN 416 MAX 2350 MIN 79 CFSM 2.38 IN 32.25

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to current year.

REMARKS.--Temperature recorder located at gaging station 1.0 mi (1.6 km) upstream from sampling site.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 34.0°C Oct. 2, 1968; minimum, freezing point on several days during December 1970, January. March 1971. February 1975.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKA-LINITY (MG/L AS CACO3)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
OCT											
12...	1130	315	318	7.9	17.5	11.6	9300	K3500	6900	92	4.1
NOV											
08...	1045	843	240	7.5	--	10.6	K64000	>6000	>250000	70	2.6
DEC											
23...	1050	1806	202	7.4	5.0	--	K3500	770	K4000	69	4.7
FEB											
01...	1230	1963	345	7.6	.0	14.0	2600	240	2200	107	5.0
22...	1130	113	376	7.9	.6	--	1300	K33	300	130	5.1
MAR											
14...	2200	--	210	7.4	--	--	--	--	--	--	2.5
15...	1000	1603	152	7.2	--	--	--	--	--	--	1.8
22...	1215	918	222	7.7	9.0	13.0	2600	K100	2200	60	3.2
APR											
12...	1100	263	320	7.6	12.0	12.6	1400	K17	K32	74	4.3
MAY											
16...	1130	678	260	7.4	11.0	10.6	9000	K40	K20000	76	3.0
JUN											
21...	1130	202	400	7.7	22.0	7.7	10000	510	520	144	4.3
JUL											
12...	1045	252	390	7.8	18.5	11.0	K30000	K13000	1000	127	3.8
AUG											
09...	1030	715	210	7.3	23.5	4.7	16000	3400	2400	70	2.4
SEP											
20...	1030	70	305	7.8	19.0	9.4	25000	4000	2200	132	3.7

DATE	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	ALGAL GROWTH POTEN-TIAL, BOTTLE TEST (MG/L)
OCT										
12...	.02	4.1	.04	.25	.29	4.4	.10	.05	7.2	--
NOV										
08...	.03	2.6	.12	.98	1.1	3.7	.18	.08	9.3	--
DEC										
23...	.02	4.7	.08	.30	.38	5.1	.08	.04	7.1	--
FEB										
01...	.01	5.0	.09	.32	.41	5.4	.06	.04	.6	--
22...	.03	5.1	.15	.38	.53	5.6	.09	.04	2.2	--
MAR										
14...	.05	2.5	1.1	2.2	3.3	5.8	.47	.16	--	--
15...	.05	1.8	.92	2.1	3.0	4.8	.58	.21	--	--
22...	.02	3.2	.15	.40	.55	3.8	.10	.04	4.0	--
APR										
12...	.03	4.3	.10	.50	.60	4.9	.07	.02	8.0	--
MAY										
16...	.03	3.0	.11	.40	.51	3.5	.08	.04	10	24
JUN										
21...	.09	4.4	.08	.14	.22	4.6	.10	.06	12	30
JUL										
12...	.06	3.9	.02	.67	.69	4.6	.14	.07	7.9	--
AUG										
09...	.05	2.4	.13	1.2	1.3	3.7	.22	.10	20	72
SEP										
20...	.04	3.7	.09	.64	.73	4.4	.14	.06	3.4	49

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N)	NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)
JUN 21...	1130	4.4	43	59000	650	2	10	10	10	200	23000

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/L AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	PHENOLS (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN 21...	230	1300	.0	10	90	22	2.9	3	42	.0

DATE	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
JUN 21...	13	.0	1.3	2.9	1.5	.0	.0	.0	.0	0

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.0	15.5	16.0	11.0	9.0	9.5	6.0	5.5	5.5			
2	17.5	15.5	16.5	12.0	10.5	11.0	6.0	6.0	6.0			
3	16.5	14.0	15.0	13.0	12.0	12.5	6.5	6.0	6.0			
4	15.0	12.5	13.5	15.0	13.0	13.5	6.5	6.5	6.5			
5	15.5	12.0	13.5	15.5	14.5	15.0	6.5	5.0	6.0			
6	14.0	12.5	13.5	15.5	13.5	14.5	5.5	5.0	5.5			
7	14.0	12.0	13.0	13.5	12.5	13.0	5.5	4.0	5.0			
8	12.5	11.0	12.0	12.5	12.0	12.0	4.0	3.0	3.5			
9	13.5	12.0	12.5	12.5	12.0	12.0	5.0	4.0	4.5			
10	13.5	12.5	13.0	13.0	12.5	12.5	---	---	---			
11	13.0	12.0	12.5	13.0	10.5	11.5	---	---	---			
12	13.5	12.0	12.5	10.5	8.5	9.0	---	---	---			
13	12.5	11.5	12.0	8.5	7.0	7.5	---	---	---			
14	12.0	11.0	11.5	7.0	6.0	6.5	---	---	---			
15	11.0	9.5	10.5	7.0	6.5	6.5	---	---	---			
16	12.0	11.0	11.5	9.0	7.5	8.0	---	---	---			
17	11.5	9.5	10.0	10.5	8.5	9.5	---	---	---			
18	10.0	9.0	9.5	10.0	8.5	9.0	---	---	---			
19	11.0	10.0	10.5	8.5	7.0	7.5	---	---	---			
20	12.0	11.0	11.5	7.5	7.0	7.0	---	---	---			
21	12.0	10.5	11.0	7.5	7.0	7.5	---	---	---			
22	12.0	10.5	11.5	8.5	8.0	8.5	---	---	---			
23	12.0	11.0	11.5	8.5	7.5	8.0	---	---	---			
24	11.0	10.0	10.5	9.0	7.5	8.0	---	---	---			
25	11.5	9.5	10.5	8.5	7.5	7.5	---	---	---			
26	11.5	11.0	11.0	7.5	7.0	7.0	---	---	---			
27	14.0	11.5	13.0	7.0	5.0	5.5	---	---	---			
28	15.0	14.0	14.0	5.5	5.0	5.0	---	---	---			
29	13.5	12.0	12.5	5.5	5.0	5.5	---	---	---			
30	12.0	10.5	11.0	5.5	5.0	5.5	---	---	---			
31	11.0	9.0	9.5	---	---	---	---	---	---			
MONTH	17.5	9.0	12.0	15.5	5.0	9.0	6.5	3.0	5.5			

01470960 TULPEHOCKEN CREEK AT BLUE MARSH DAMSITE NEAR READING, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1							---	---	---	14.5	11.5	12.5
2							---	---	---	14.0	11.0	12.0
3							---	---	---	15.5	12.0	13.5
4							---	---	---	14.5	11.0	12.5
5							---	---	---	11.0	10.0	10.5
6							---	---	---	10.0	10.0	10.0
7							---	---	---	13.0	10.0	11.0
8							---	---	---	13.0	11.5	12.0
9							---	---	---	14.0	11.5	12.5
10							---	---	---	14.0	14.0	14.0
11							---	---	---	16.0	12.0	13.5
12							---	---	---	16.5	14.5	15.5
13							---	---	---	16.5	15.0	15.0
14							---	---	---	15.0	14.5	14.5
15							---	---	---	14.5	14.5	14.5
16							---	---	---	14.5	14.5	14.5
17							---	---	---	14.5	14.5	14.5
18							12.5	10.5	11.5	14.5	14.5	14.5
19							12.0	10.0	10.5	15.5	14.5	14.5
20							10.5	9.0	9.5	17.0	14.5	15.5
21							10.5	10.0	10.5	17.5	16.0	16.5
22							12.5	9.0	10.5	17.0	15.0	16.0
23							13.0	10.5	11.5	16.5	15.0	15.5
24							12.5	11.5	12.0	15.5	15.0	15.0
25							13.0	11.0	12.0	16.0	15.0	15.5
26							13.0	12.0	12.5	17.5	15.5	16.5
27							12.5	10.5	11.5	17.5	16.5	17.0
28							13.0	11.0	12.0	19.0	17.0	17.5
29							14.5	11.5	12.5	19.0	18.0	18.0
30							14.5	14.5	14.5	20.5	18.0	18.5
31							---	---	---	21.0	18.5	19.5
MONTH							14.5	9.0	11.5	21.0	10.0	14.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	21.5	18.5	20.0	24.0	20.0	21.5	21.5	20.5	21.0	21.5	20.0	20.5
2	21.5	19.0	20.5	22.5	19.0	20.0	21.5	20.5	21.0	21.5	19.0	20.5
3	21.5	18.0	19.5	19.0	17.5	18.0	23.5	22.0	23.0	21.5	19.0	20.5
4	18.5	16.0	17.5	17.5	16.0	16.0	24.0	20.5	24.0	21.5	19.0	20.0
5	19.5	18.0	18.5	21.0	15.5	17.0	24.0	23.0	23.5	22.0	18.0	20.0
6	20.5	16.0	18.0	22.5	18.5	20.0	23.0	22.0	22.5	23.0	19.0	21.0
7	19.5	17.0	17.5	24.5	19.5	22.5	23.5	23.0	23.5	23.5	20.5	22.0
8	19.0	17.0	17.5	25.5	22.0	23.5	23.5	23.0	23.5	23.0	18.0	20.0
9	21.0	18.5	19.5	27.0	23.5	25.0	23.5	23.0	23.0	20.5	17.0	18.5
10	21.5	17.5	19.5	26.5	24.0	24.5	23.5	21.0	22.0	19.0	16.5	17.5
11	22.0	18.5	20.0	24.5	22.0	23.0	21.0	21.0	21.0	20.5	17.5	18.5
12	22.5	19.0	21.0	24.0	20.5	22.0	21.0	21.0	21.0	20.0	19.0	19.5
13	22.0	22.0	22.0	24.0	21.0	22.5	21.0	21.0	21.0	---	---	---
14	22.0	22.0	22.0	24.0	21.5	22.5	22.0	21.0	21.5	---	---	---
15	22.0	22.0	22.0	22.5	21.5	22.0	23.0	22.0	22.5	---	---	---
16	22.0	22.0	22.0	22.5	22.5	22.5	23.5	23.0	23.0	---	---	---
17	22.0	22.0	22.0	22.5	21.5	22.0	24.5	23.5	24.0	---	---	---
18	22.0	22.0	22.0	24.0	22.5	23.0	24.5	24.0	24.0	---	---	---
19	24.0	21.5	22.5	24.0	24.0	24.0	24.0	23.5	23.5	---	---	---
20	24.5	22.0	23.0	25.5	24.0	24.5	24.0	23.5	24.0	21.0	18.0	20.0
21	23.5	20.5	21.5	26.0	25.5	25.5	23.5	22.5	23.0	21.0	17.5	19.0
22	22.0	20.0	21.0	27.0	26.0	26.5	22.5	22.0	22.0	20.5	18.0	19.0
23	23.0	19.5	21.0	27.5	27.0	27.0	22.0	21.5	22.0	19.5	16.5	18.0
24	22.5	19.0	20.5	27.5	27.0	27.5	22.5	22.0	22.0	18.0	15.0	16.5
25	22.0	18.5	20.5	27.0	24.5	26.0	22.5	22.5	22.5	18.5	15.5	17.0
26	22.0	19.5	20.0	24.5	23.5	24.0	23.0	22.0	22.0	17.5	14.0	16.0
27	24.5	20.0	21.5	24.5	20.5	24.0	22.5	19.5	20.5	17.0	13.0	15.0
28	25.0	22.0	23.5	25.5	24.0	25.0	21.0	20.0	20.5	16.5	14.0	15.0
29	24.5	21.5	23.0	25.0	24.5	24.5	23.0	20.0	21.5	16.0	12.5	14.5
30	24.5	21.0	23.0	24.5	20.5	24.0	22.5	21.0	21.5	15.5	12.5	14.0
31	---	---	---	23.5	21.5	23.0	22.0	21.0	21.0	---	---	---
MONTH	25.0	16.0	20.5	27.5	15.5	23.0	24.5	19.5	22.5	23.5	12.5	18.5

01471000 TULPEHOCKEN CREEK NEAR READING, PA

LOCATION.--Lat 40°22'08", long 75°58'46", Berks County, Hydrologic Unit 02040203, on right bank, 15 ft (4.6 m) upstream from covered bridge, 1 mi (2 km) downstream from Cacoosing Creek, 2.5 mi (4.0 km) upstream from mouth, and 3.5 mi (5.6 km) northwest of square at Reading. Water-quality sampling site at covered bridge 15 ft (4.6 m) downstream.

DRAINAGE AREA.--211 mi² (546 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for October, November 1950, published in WSP 1722.

REVISED RECORDS.--WSP 1382: 1951-53, 1954(M). WDR PA-67: 1965(M). WDR PA-72: 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 216.00 ft (65.837 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record Jan. 17 to Feb. 1, which are fair. Flow affected by construction of Blue Marsh Dam 3.9 mi (6.3 km) upstream.

AVERAGE DISCHARGE.--28 years, 312 ft³/s (8.836 m³/s), 20.08 in/yr (510 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,00 ft³/s (481 m³/s) June 23, 1972, gage height, 15.65 ft (4.770 m), from floodmark in gage shelter, from rating curve extended above 3,500 ft³/s (99 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 23 ft³/s (0.65 m³/s) Dec. 1, 1964, gage height, 0.94 ft (0.287 m), result of upstream shutoff.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,370 ft³/s (124 m³/s) Jan. 26, gage height, 6.14 ft (1.871 m), from floodmarks; minimum, 55 ft³/s (1.56 m³/s) Feb. 23, gage height, 1.13 ft (0.344 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	183	988	410	1660	221	1170	295	370	157	211	281
2	232	174	1010	400	917	211	994	290	360	157	184	206
3	175	177	808	380	513	212	847	286	354	228	161	188
4	141	245	671	370	453	209	757	281	396	365	180	172
5	129	227	621	350	422	196	690	329	324	228	194	154
6	127	209	799	320	413	194	576	319	305	184	198	146
7	127	440	710	300	364	191	558	305	300	168	497	141
8	115	765	600	400	424	195	541	286	339	164	887	141
9	308	681	550	1500	373	189	506	434	295	172	709	153
10	569	546	478	1500	351	194	518	360	267	184	524	133
11	342	999	417	1000	348	207	529	319	249	232	409	131
12	284	860	380	700	339	246	456	305	241	184	447	132
13	236	666	383	600	335	415	423	300	267	146	409	141
14	220	589	444	700	334	995	396	717	267	139	348	114
15	652	450	795	500	302	1870	375	1070	236	319	291	134
16	564	350	674	480	283	1730	370	919	215	305	257	153
17	632	350	582	473	284	1300	365	1050	215	245	237	147
18	584	450	823	540	279	1040	360	1030	220	203	215	130
19	493	350	1350	450	271	936	407	905	203	184	199	156
20	435	320	1250	400	247	1020	506	751	195	172	188	139
21	363	300	1630	450	256	1020	428	651	199	164	183	130
22	314	300	1910	350	242	1050	386	564	232	157	176	130
23	282	380	1690	330	231	1000	365	518	211	150	168	127
24	254	350	1370	310	242	962	349	638	195	136	156	117
25	234	330	1130	600	240	881	349	751	184	132	161	112
26	227	600	950	1200	247	1130	339	576	172	139	242	106
27	251	500	760	1000	239	2500	329	512	180	143	167	106
28	225	450	578	2500	223	2510	324	478	168	154	413	106
29	204	400	478	2250	---	2200	310	445	157	143	451	109
30	201	435	450	2000	---	1860	305	418	154	143	224	112
31	194	---	430	2500	---	1460	---	391	---	180	218	---
TOTAL	9262	13076	25709	25263	10832	28344	14828	16493	7470	5777	9304	4247
MEAN	299	436	829	815	387	914	494	532	249	186	300	142
MAX	652	999	1910	2500	1660	2510	1170	1070	396	365	887	281
MIN	115	174	380	300	223	189	305	281	154	132	156	106
CFSM	1.42	2.07	3.93	3.86	1.83	4.33	2.34	2.52	1.18	.88	1.42	.67
IN.	1.63	2.31	4.53	4.45	1.91	5.00	2.61	2.91	1.32	1.02	1.64	.75

CAL YR 1977 TOTAL 125293 MEAN 343 MAX 1910 MIN 45 CFSM 1.63 IN 22.09
WTR YR 1978 TOTAL 170605 MEAN 467 MAX 2510 MIN 106 CFSM 2.21 IN 30.08

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, OCTOBER 1977 TO JULY 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT									
12...	0940	9813	9813	290	360	8.5	11.5	8.8	127
NOV									
15...	1010	9813	9813	450	340	--	6.0	12.4	138
DEC									
06...	0850	9813	9813	811	300	--	4.5	10.9	124
JAN									
30...	0925	9813	9813	2000	260	--	--	--	99
FEB									
21...	0925	9813	9813	228	420	--	1.0	13.4	172
MAR									
13...	0915	9813	9813	412	370	7.9	4.0	10.8	152
APR									
04...	0925	9813	9813	769	380	8.3	6.5	11.0	130
MAY									
30...	--	9813	9813	--	--	--	--	--	--
30...	0905	9813	9813	407	395	7.8	17.0	8.6	150
JUN									
19...	1015	9813	9813	191	450	7.8	20.0	7.8	176
JUL									
12...	1100	9813	9813	191	430	7.1	21.0	6.3	130
AUG									
21...	1250	9813	9813	180	430	8.1	23.0	9.6	134

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)
OCT									
12...	0	40	41	6.3	6.3	108	28	17	<10
NOV									
15...	0	40	--	10	--	104	26	13	226
DEC									
06...	0	34	--	10	--	96	26	15	190
JAN									
30...	0	28	--	7.4	--	72	18	13	138
FEB									
21...	0	51	--	12	--	146	24	17	294
MAR									
13...	0	44	--	11	--	118	26	21	232
APR									
04...	0	44	--	9.9	--	120	20	15	164
MAY									
30...	--	--	--	--	--	--	25	13	--
30...	0	41	--	12	--	126	--	--	252
JUN									
19...	0	44	--	17	--	148	35	20	294
JUL									
12...	0	48	--	4.4	--	144	25	20	316
AUG									
21...	0	50	--	2.0	--	138	15	19	258

01471000 TULPEHOCKEN CREEK NEAR READING, PA--Continued

WATER-QUALITY DATA, OCTOBER 1977 TO JULY 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT								
12...	--	4.1	.06	.14	.31	10	1250	.02
NOV								
15...	24	4.4	.05	.15	.17	<10	910	<.10
DEC								
06...	--	3.5	.05	.23	.23	30	1760	<.10
JAN								
30...	--	3.7	3.7	.30	.20	20	2013	<.10
FEB								
21...	--	5.0	.04	.25	.15	<10	760	.03
MAR								
13...	--	4.6	.06	.33	.22	10	1250	<.01
APR								
04...	--	3.9	.03	.17	.21	10	380	.03
MAY								
30...	--	--	--	--	--	--	--	--
30...	--	3.8	.07	.22	.17	<10	990	.02
JUN								
19...	--	4.7	.10	.18	1.9	20	480	.03
JUL								
12...	--	4.4	.10	.20	.25	10	890	.02
AUG								
21...	--	4.4	.05	.10	.10	10	160	--

DATE	TIME	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
AUG							
21...	1250	<3	<10	<50	30	10	<10

01471510 SCHUYLKILL RIVER AT READING, PA

LOCATION.--Lat 40°20'10", long 75°56'15", Berks County, Hydrologic Unit 02040203, on right bank at West Reading, 1,500 ft (457 m) downstream from Penn Avenue Bridge.

DRAINAGE AREA.--880 mi² (2,280 km²).

PERIOD OF RECORD.--May 1914 to Sept. 1915, Oct. 1919 to Sept. 1930 and June 30, 1977 to current year. Monthly discharge only prior to current year published in W.S.P.-1302. Diversion by Schuylkill Navigation Canal included during the navigation seasons of 1914-15.

GAGE.--Water-stage recorder. Datum of gage is 185.50 ft (56.540 m) Pennsylvania Railroad Datum. May 7, 1914 to Sept. 30, 1930 nonrecording gage at site 1,500 ft (457 m) upstream at same datum.

REMARKS.--Records good except those for the period Oct. 1 to Dec. 1, which are fair.

AVERAGE DISCHARGE.--13 years (water years 1915, 1920-30, 1978), 1,550 ft³/s (43.90 m³/s), 23.95 in/yr (608 mm/yr), 1914-15 adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,300 ft³/s (1,030 m³/s) Oct. 1, 1924, gage height, 16.5 ft (5.029 m), from rating curve extended above 27,000 ft³/s (765 m³/s); minimum observed, 82 ft³/s (2.32 m³/s) Aug. 12, 1930, gage height, -1.19 ft (-0.363 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972, reached a stage of about 31.3 ft (9.540 m) present datum, from floodmarks, discharge, about 90,000 ft³/s (2,550 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,800 ft³/s (164 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Oct. 17	1815	7,460	211	6.08	1.853	Jan. 9	1715	16,600	470	10.08	3.072
Nov. 8	1545	9,080	257	6.84	2.085	Jan. 26	1645	*25,800	731	*13.51	4.118
Nov. 11	0645	7,120	202	5.87	1.789	Mar. 15	0100	12,500	354	8.39	2.557
Dec. 1	1200	7,780	220	6.20	1.890	Mar. 27	1715	19,300	547	11.12	3.389
Dec. 19	1000	7,780	220	6.20	1.890	May 14	2300	13,900	394	8.98	2.737
Dec. 21	2330	11,100	314	7.74	2.359	Aug. 8	0815	7,380	209	6.00	1.829

Minimum discharge, 314 ft³/s (8.89 m³/s) Mar. 3, gage height, 1.31 ft (0.399 m), result of freezeup.

REVISIONS.--Revised maximum discharge for period June 30 to Sept. 30, 1977 and revised daily discharges in cubic feet per second, for Sept. 1977 are given below. These figures supersede those given in the report for 1977. Maximun discharge, 2700 ft³/s (76.5 m³/s) Sept. 26, 1978, gage height, 3.34 ft (1.018 m).
Sept. 25....1290 Sept. 26....1880 Sept. 27....1860 Sept. 28....1470 Sept. 29....1150 Sept. 30...965
Sept. 1977 Total...16239 Mean...541 Max...1880 Min...248 Cfsm...0.62 In. ...0.69

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	1000	6260	2310	4000	800	4540	997	1690	540	803	1020
2	1550	980	5240	2190	2800	751	3820	960	1530	504	621	751
3	1150	1000	4720	1930	2200	612	3240	925	1500	867	531	640
4	921	1200	4340	1680	1970	650	3060	910	1670	1650	670	585
5	792	1100	4320	1640	1800	690	2910	1070	1330	965	690	558
6	730	1050	4800	1610	1770	660	2460	1120	1200	730	751	540
7	700	3240	3800	1600	1560	650	2410	1010	1140	630	2450	531
8	612	7820	3100	1720	1680	690	2190	944	1550	585	5840	531
9	1550	6570	2500	12000	1500	660	1970	1550	1830	567	3380	540
10	3770	4680	2000	9290	1380	670	1890	1410	1780	612	2210	495
11	2390	6160	1900	5650	1310	720	1900	1180	1370	603	1690	487
12	1880	4710	1750	4460	1280	889	1780	1100	1200	522	2040	531
13	1510	3700	1760	3650	1250	1630	1630	1120	1320	455	1680	567
14	2040	3000	1900	3700	1300	4320	1510	5800	1270	447	1330	487
15	2940	2600	4700	3080	1190	10300	1400	10100	1040	1140	1120	513
16	2900	2440	5020	2490	1110	8000	1330	6610	954	932	976	549
17	5820	2280	3680	2380	1120	5200	1280	7480	910	761	878	558
18	5690	2320	4540	2640	1070	4030	1250	7390	899	650	803	513
19	4250	1890	6710	2420	1050	3670	1390	6230	835	558	730	751
20	3490	1690	6100	2140	920	4630	1950	4920	782	504	690	846
21	2800	1560	7980	2040	951	4680	1820	3990	803	487	630	650
22	2350	1600	9570	1970	918	5520	1550	3270	1020	455	612	720
23	1990	1690	6810	1680	872	5490	1420	2800	921	431	603	782
24	1680	1670	5300	1510	891	5360	1350	3340	751	415	567	621
25	1470	1590	4960	2320	887	4590	1330	4000	680	407	567	585
26	1450	2970	4680	12000	884	5760	1270	3020	630	495	670	549
27	1590	2850	3950	11500	833	17700	1210	2630	670	455	612	540
28	1420	2510	3470	7160	797	14000	1170	2380	630	495	1290	540
29	1300	2250	3020	5690	---	9340	1090	2180	558	447	1500	487
30	1180	2310	2720	4570	---	6980	1060	2000	567	407	835	479
31	1100	---	2570	4650	---	5560	---	1880	---	629	814	---
TOTAL	63715	80430	134170	123670	39293	135202	57180	94316	33030	19345	38583	17946
MEAN	2055	2681	4328	3989	1403	4361	1906	3042	1101	624	1245	598
MAX	5820	7820	9570	12000	4000	17700	4540	10100	1830	1650	5840	1020
MIN	612	980	1750	1510	797	612	1060	910	558	407	531	479
CFSM	2.34	3.05	4.92	4.53	1.59	4.96	2.17	3.46	1.25	.71	1.42	.68
IN.	2.69	3.40	5.67	5.23	1.66	5.72	2.42	3.99	1.40	.82	1.63	.76

WTR YR 1978 TOTAL 836880 MEAN 2293 MAX 17700 MIN 407 CFSM 2.61 IN 35.38

01471980 MANATAWNY CREEK NEAR POTTSTOWN, PA

LOCATION.--Lat 40°16'22", long 75°40'49", Berks County, Hydrologic Unit 02040203, on left bank about 180 ft (55 m) upstream from bridge on Manatawny Street, 0.7 mi (1.1 km) downstream from Ironstone Creek, 2.4 mi (3.9 km) northwest of Pottstown, 3.1 mi (5.0 km) upstream from mouth, and 4.7 mi (7.6 km) southwest of Boyertown.

DRAINAGE AREA.--85.5 mi² (221 km²).

PERIOD OF RECORD.--August 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 150.00 ft (45.720 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter periods, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft³/s (89.5 m³/s) Mar. 20, 1975, gage height, 7.05 ft (2.149 m); minimum, 22 ft³/s (0.62 m³/s) Sept. 10, 14, 15, 1976, Dec. 30, 1977; minimum gage height, 1.80 ft (0.549 m) Dec. 30, 1976, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972 reached a stage of 17.1 ft (5.21 m), from floodmarks, discharge, about 9,600 ft³/s (272 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)	Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)
Nov. 8	0215	1,630	46.2	5.21	1.588	Jan. 26	1200	*3,980	113	*9.01	2.746
Dec. 1	0830	1,350	38.2	4.71	1.436	Mar. 14	1800	1,800	51.0	5.50	1.676
Dec. 18	1515	1,760	49.8	5.44	1.658	Mar. 26	2045	2,120	60.0	6.03	1.838
Dec. 21	1200	1,370	38.8	4.75	1.448	May 14	1730	1,390	39.4	4.79	1.460
Jan. 9	1145	2,300	65.1	6.33	1.929	Aug. 7	0445	1,310	37.1	4.64	1.414

Minimum discharge, 33 ft³/s (0.93 m³/s) Sept. 11; minimum gage height, 1.93 ft (0.588 m) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	50	833	140	230	96	258	108	127	64	76	87
2	60	49	263	130	206	94	222	105	118	62	61	61
3	51	56	198	140	194	92	210	105	139	366	53	55
4	42	111	169	140	190	90	222	108	183	269	73	51
5	38	76	194	130	170	88	231	136	121	98	73	47
6	38	66	378	126	195	86	190	124	110	76	85	47
7	40	597	180	129	222	84	206	110	108	67	602	45
8	38	1030	130	183	239	82	183	113	118	64	156	47
9	120	218	130	1320	214	80	166	231	108	61	85	50
10	105	162	160	266	202	78	159	136	98	62	73	45
11	58	337	210	222	202	92	159	115	94	67	69	48
12	48	149	220	214	206	130	169	108	89	56	88	50
13	43	124	160	186	198	253	146	105	124	55	69	64
14	51	110	120	362	150	799	136	778	103	53	62	45
15	110	103	454	190	130	982	133	416	89	94	58	53
16	104	96	186	172	130	526	130	360	85	66	56	55
17	298	118	166	172	130	286	127	564	87	62	55	48
18	98	176	919	466	127	246	124	435	89	58	51	45
19	80	108	797	222	124	370	180	274	85	53	50	56
20	83	94	373	183	120	421	337	218	78	51	48	51
21	67	94	1020	214	115	457	187	190	98	50	45	44
22	61	98	426	198	115	531	156	166	143	48	44	43
23	56	180	325	198	110	343	139	156	91	45	44	44
24	53	139	270	214	110	347	133	613	80	44	43	42
25	51	118	448	625	105	235	130	409	74	44	43	40
26	54	505	257	2720	100	835	124	214	74	44	45	39
27	67	176	170	810	100	1400	124	180	78	44	45	39
28	61	146	180	490	98	607	118	169	73	55	149	39
29	56	139	190	368	---	442	113	156	67	47	248	38
30	53	176	170	294	---	337	110	146	66	44	67	37
31	51	---	150	248	---	291	---	136	---	91	76	---
TOTAL	2176	5601	9846	11472	4432	10808	5022	7184	2997	2360	2784	1455
MEAN	70.2	187	318	370	158	348	167	232	99.9	76.1	89.8	48.5
MAX	298	1030	1020	2720	239	1400	337	778	183	366	602	87
MIN	38	49	120	126	98	78	110	105	66	44	43	37
CFSM	.82	2.19	3.72	4.33	1.85	4.07	1.95	2.71	1.17	.89	1.05	.57
IN.	.95	2.44	4.28	4.99	1.93	4.70	2.18	3.13	1.30	1.03	1.21	.63

CAL YR 1977 TOTAL 49074 MEAN 134 MAX 1390 MIN 27 CFSM 1.57 IN 21.35
WTR YR 1978 TOTAL 66129 MEAN 181 MAX 2720 MIN 37 CFSM 2.12 IN 28.77

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA

LOCATION.--Lat 40°14'30", long 75°39'07", Montgomery County, Hydrologic Unit 02040203, on right bank 75 ft (23 m) upstream from Hanover Street bridge in Pottstown and 0.4 mi (0.6 km) downstream from Manatawny Creek. Water-quality sampling site at bridge 75 ft (23 m) downstream.
DRAINAGE AREA.--1,147 mi² (2,971 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1926 to current year. Monthly discharges only for some periods, published in WSP 1302.
GAGE.--Water-stage recorder. Datum of gage is 117.86 ft (35.924 m) National Geodetic Vertical Datum of 1929. October 1926 to Nov. 22, 1928 nonrecording gage and Nov. 23, 1928 to Dec. 26, 1972 recording gage, at site 100 ft (30 m) downstream at same datum. Dec. 27, 1972 to May 10, 1974 nonrecording gage 1.0 mi (1.6 km) downstream at datum 2.83 ft (0.863 m) lower.
REMARKS.--Records good. Some regulation at low flow by mill above station.
AVERAGE DISCHARGE.--52 years, 1,898 ft³/s (53.75 m³/s), 22.48 in/yr (571 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,900 ft³/s (2,720 m³/s) June 23, 1972, gage height, 29.97 ft (9.135 m), from floodmark; minimum, 87 ft³/s (2.46 m³/s) Aug. 13, 1930, gage height, 0.43 ft (0.131 m); minimum daily, 175 ft³/s (4.96 m³/s) Sept. 19, 1932.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to October 1926, 21.0 ft (6.40 m) Feb. 28, 1902, from floodmarks, discharge, 53,900 ft³/s (1,530 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,200 ft³/s (204 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 18	0100	7,540	214	6.38	1.945	Jan. 9	2000	19,200	544	11.13	3.392
Nov. 8	0415	12,700	360	8.67	2.643	Jan. 26	2130	*32,800	929	*15.41	4.697
Nov. 11	1415	8,680	246	6.95	2.118	Mar. 15	0700	14,200	402	9.27	2.825
Dec. 1	1915	10,200	289	7.67	2.338	Mar. 27	1545	23,500	666	12.61	3.844
Dec. 18	1715	11,400	323	8.14	2.481	May 15	0545	14,900	422	9.57	2.917
Dec. 22	0530	13,400	379	8.94	2.725	Aug. 8	1500	7,280	206	6.25	1.905

Minimum discharge, 679 ft³/s (19.2 m³/s) July 24, 25; minimum gage height, 1.66 ft (0.506 m) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	971	1110	7690	2720	4830	1160	5620	1440	2250	884	1190	1570
2	1400	1070	7970	2540	3930	1120	4750	1390	2100	828	1000	1230
3	1580	1090	5650	2280	2920	1120	4050	1370	2030	1990	852	1070
4	1270	1470	4430	2020	2550	916	3800	1340	2370	2460	958	983
5	1090	1500	3860	1990	2300	1040	3720	1520	1960	1620	1090	925
6	1000	1290	4950	1940	2270	1020	3210	1620	1740	1190	1000	884
7	976	2990	4060	1900	2090	1000	3090	1500	1630	1030	3460	876
8	916	10400	3310	2030	2250	1030	2870	1390	1980	949	5670	868
9	1100	7890	3000	13600	2070	1010	2590	2030	1900	908	4250	876
10	3960	5220	2640	12700	1910	1020	2420	2030	2490	908	2770	852
11	2820	7310	2260	7000	1840	1080	2450	1650	1860	1100	2180	820
12	2080	6280	2030	5530	1810	1280	2410	1530	1650	876	2330	828
13	1630	4730	2090	4290	1730	1970	2220	1520	1720	894	2210	933
14	1480	3670	2430	5160	1730	4990	2060	5540	1750	756	1820	860
15	2500	3030	5080	3900	1630	12800	1940	12700	1460	1280	1580	852
16	3470	2630	4620	3040	1520	10400	1860	8260	1340	1460	1400	900
17	5350	2530	4080	2840	1500	6530	1790	8680	1310	1090	1290	884
18	6450	2790	6980	3960	1480	4990	1750	8870	1290	1010	1190	868
19	4510	2160	9410	3160	1440	4630	1930	7560	1240	876	1120	941
20	3790	1890	7730	2730	1320	5670	2710	6050	1160	820	1050	1290
21	3000	1740	9840	2570	1310	5810	2530	4910	1160	780	992	1030
22	2540	1780	12100	2450	1290	6670	2160	4070	1500	748	949	941
23	2210	2170	8630	2130	1220	6560	1960	3460	1340	725	933	1170
24	1920	2040	6600	1990	1280	6400	1860	4530	1140	789	908	992
25	1720	1840	6130	3400	1260	5530	1830	5380	1040	789	884	900
26	1630	3730	5760	22000	1260	7300	1760	3950	992	756	908	860
27	1700	3360	4620	20000	1210	20600	1710	3340	1030	748	1200	844
28	1550	2860	4030	9550	1170	18300	1650	3030	1000	852	2100	844
29	1370	2500	3490	7360	---	11700	1560	2770	925	756	2280	812
30	1240	2620	3200	5520	---	8540	1510	2600	868	701	1400	780
31	1170	---	2920	5670	---	6810	---	2440	---	1060	1230	---
TOTAL	68393	95770	161590	167970	53120	168996	75770	118470	46145	31383	52186	28483
MEAN	2206	3192	5213	5418	1897	5451	2526	3822	1538	1012	1683	949
MAX	6450	10400	12100	22000	4830	20600	5620	12700	2490	2460	5670	1570
MIN	916	1070	2030	1900	1170	916	1510	1340	868	701	852	780
CFSM	1.92	2.78	4.55	4.72	1.65	4.75	2.20	3.33	1.34	.88	1.47	.83
IN.	2.22	3.11	5.24	5.45	1.72	5.48	2.46	3.84	1.50	1.02	1.69	.92

CAL YR 1977 TOTAL 810726 MEAN 2221 MAX 15700 MIN 432 CFSM 1.94 IN 26.29
WTR YR 1978 TOTAL 1068276 MEAN 2927 MAX 22000 MIN 701 CFSM 2.55 IN 34.65

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT										
03...	1900	9813	9813	1520	350	--	17.0	--	--	--
NOV										
02...	0900	9813	9813	1060	440	--	--	--	--	--
DEC										
08...	0930	9813	9813	3360	270	--	--	--	--	--
JAN										
09...	1000	9813	9813	13300	230	--	--	--	--	--
MAR										
07...	1930	9813	9813	1020	480	--	--	--	--	--
JUN										
08...	0930	9813	9813	1740	430	--	--	--	18	--
JUL										
13...	1445	9813	9813	772	420	--	--	--	12	1.2
AUG										
01...	1530	9813	9813	1270	450	7.5	22.0	5.9	16	--
SEP										
12...	1100	9813	9813	820	500	--	--	--	--	--
15...	1100	9813	9813	--	--	--	--	--	--	--
25...	1100	9813	9813	900	--	7.9	19.0	6.5	24	--

DATE	HARD- NESS (MG/L AS CACO3)	ACIDITY MINERAL (METHYL ORANGE) (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT										
03...	137	--	0	--	34	--	13	60	90	18
NOV										
02...	152	--	--	81	--	.0	--	64	95	25
DEC										
08...	108	--	--	26	--	11	--	60	46	19
JAN										
09...	92	--	--	50	--	.0	--	50	44	16
MAR										
07...	168	--	--	44	--	15	--	92	92	29
JUN										
08...	144	--	--	36	--	14	--	74	65	31
JUL										
13...	161	--	--	44	--	13	--	94	20	22
AUG										
01...	128	0	0	--	40	--	7.0	82	60	24
SEP										
12...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	30
25...	180	--	0	49	--	14	--	82	110	>.0

DATE	FLUO- RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
OCT										
03...	.1	230	30	--	2.6	.09	.25	.23	700	<3
NOV										
02...	.1	328	60	334	2.8	.11	.39	.18	140	<3
DEC										
08...	.1	124	20	144	2.8	.05	.31	.14	360	1
JAN										
09...	.1	122	490	612	1.9	.06	.33	.61	13000	<3
MAR										
07...	.2	334	0	334	3.9	.10	1.2	.22	40	<3
JUN										
08...	.1	268	34	302	3.0	.24	.56	.31	--	<3
JUL										
13...	.2	326	20	346	3.3	.07	.14	.22	--	<3
AUG										
01...	.2	312	34	--	3.1	.14	.27	.27	540	<3
SEP										
12...	--	--	--	--	--	--	--	.37	--	<3
15...	--	--	--	--	--	--	--	--	--	--
25...	--	340	24	--	3.1	.11	.18	--	--	<3

01472000 SCHUYLKILL RIVER AT POTTSTOWN, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT										
03...	<10	10	960	<50	360	50	90	.03	<10	.05
NOV										
02...	<10	<10	280	<50	290	<10	80	.02	<1	.02
DEC										
08...	20	<10	660	6	240	<10	80	.02	2	.02
JAN										
09...	10	50	14210	<50	730	50	190	.02	<10	<.02
MAR										
07...	20	30	410	<10	510	40	110	.01	2	.06
JUN										
08...	10	10	400	<50	160	30	80	.01	6	.03
JUL										
13...	<10	20	110	<50	60	<10	--	.00	37	--
AUG										
01...	<10	10	700	<50	170	20	160	.01	15	.08
SEP										
12...	--	--	340	--	150	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
25...	<10	<10	340	<50	150	10	70	<.01	8	.02

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA

LOCATION.--Lat 40°09'05", long 75° 36'06", Chester County, Hydrologic Unit 02040203, on right bank 70 ft (21 m) downstream from two-span county bridge on French Creek Road, 4.5 mi (7.2 km) northwest of Phoenixville, and 7.3 mi (11.7 km) upstream from mouth.

DRAINAGE AREA.--59.1 mi² (153.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 160 ft (49 m), from topographic map. Prior to Nov. 7, 1968, nonrecording gage at site 70 ft (21 m) upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--10 years, 94.2 ft³/s (2.668 m³/s), 21.65 in/yr (550 mm/yr).

EXTREMES FOR PERIOD OF RECORD.-- Maximum discharge, 11,200 ft³/s (317 m³/s) June 22, 1972, gage height, 13.66 ft (4.164 m), from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurement of peak flow; minimum, 11 ft³/s (0.31 m³/s) July 4, 5, 1969, gage height, 4.11 ft (1.253 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft³/s (21.2 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 8	0345	1,810	51.3	8.11	2.472	Mar. 16	Unknown	1,360	38.5	7.55	2.301
Dec. 1	0445	776	22.0	6.66	2.030	Mar. 26	2045	1,770	50.1	8.06	2.457
Dec. 18	1545	1,690	47.9	7.96	2.426	May 9	Unknown	1,120	31.7	7.20	2.195
Dec. 21	1045	1,000	28.3	7.03	2.143	May 14	1300	1,400	39.6	7.60	2.316
Jan. 9	0515	1,520	43.0	7.75	2.362	July 3	1830	1,110	31.4	7.19	2.192
Jan. 26	1215	*2,840	80.4	*9.20	2.804	Aug. 12	2230	1,180	33.4	7.29	2.222
Mar. 14	Unknown	2,020	57.2	8.34	2.542	Aug. 28	0600	1,580	44.7	7.83	2.387

Minimum discharge, 19 ft³/s (0.54 m³/s) Oct. 6, gage height, 4.21 ft (1.283 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	431	95	159	96	204	78	88	41	68	172
2	30	25	152	94	151	94	181	75	81	40	58	78
3	25	37	108	85	140	92	170	75	94	378	47	54
4	21	112	92	88	125	92	173	77	137	318	45	47
5	20	53	102	90	122	92	198	102	90	112	55	42
6	19	40	157	81	107	92	162	96	81	77	52	40
7	21	377	94	86	151	93	184	90	78	65	53	38
8	20	959	72	130	155	94	152	100	93	60	44	37
9	71	178	74	862	145	96	137	260	83	56	38	39
10	69	112	71	180	132	100	130	230	71	53	35	35
11	34	173	88	132	134	120	130	96	66	55	35	34
12	27	92	90	131	129	170	144	86	64	48	135	34
13	24	72	65	114	130	350	123	83	88	45	381	33
14	33	62	110	300	104	800	112	795	69	44	75	30
15	112	57	186	154	118	910	108	449	61	65	51	36
16	94	53	103	126	110	450	104	294	58	96	45	42
17	157	66	82	121	105	350	102	356	60	75	42	52
18	66	112	741	380	100	320	100	281	62	56	36	37
19	44	64	756	183	100	360	165	201	59	47	35	44
20	40	53	263	134	98	440	260	162	55	44	33	41
21	34	51	683	170	98	430	144	140	62	42	30	34
22	30	56	296	150	97	400	119	123	104	40	30	35
23	27	162	188	134	98	292	106	116	63	38	29	36
24	26	104	162	132	99	278	102	303	55	37	28	32
25	25	80	224	463	100	209	98	218	51	45	28	31
26	27	311	155	2050	102	723	94	140	50	48	30	29
27	43	110	116	608	100	1160	92	122	65	42	108	28
28	35	83	115	292	98	431	88	116	54	57	714	28
29	30	78	120	217	---	303	83	108	47	43	110	27
30	27	110	114	181	---	247	82	101	44	39	60	26
31	25	---	98	162	---	218	---	94	---	68	66	---
TOTAL	1278	3867	6108	8125	3307	9902	4047	5567	2133	2274	2596	1263
MEAN	41.2	129	197	262	118	319	135	180	71.1	73.4	83.7	42.1
MAX	157	959	756	2050	159	1160	260	795	137	378	714	172
MIN	19	25	65	81	97	92	82	75	44	37	28	26
CFSM	.70	2.18	3.33	4.43	2.00	5.40	2.28	3.05	1.20	1.24	1.42	.71
IN.	.80	2.43	3.84	5.11	2.08	6.23	2.55	3.50	1.34	1.43	1.63	.79

CAL YR 1977 TOTAL 30338 MEAN 83.1 MAX 1020 MIN 10 CFSM 1.41 IN 19.10

WTR YR 1978 TOTAL 50467 MEAN 138 MAX 2050 MIN 19 CFSM 2.34 IN 31.77

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1969 to current year.

COOPERATION.--Four water-quality analyses were furnished by thePennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, NOVEMBER 1977 TO AUGUST 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
OCT										
21...	1600	160	7.4	13.5	11.8	54	24	14	4.6	6.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT										
21...	2.1	37	0	30	2.4	17	8.8	.1	17	108

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)
OCT										
21...	89	1.3	.00	1.3	.02	.28	.30	1.6	.02	.01

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT									
21...	11	0	0	2	170	160	20	1	10

01472157 FRENCH CREEK NEAR PHOENIXVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)
NOV 02...	1100	9813	9813	25	170	--	--	--	--	60	15	8.2
FEB 14...	0900	9813	9813	102	120	--	--	--	--	50	12	5.5
MAY 30...	1400	9813	9813	103	130	--	--	--	--	45	10	5.2
AUG 08...	1500	9813	9813	30	130	8.5	26.0	8.3	6	47	--	--

DATE	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
NOV 02...	40	14	12	146	4	150	1.4	.02	.07	.05	160
FEB 14...	20	8.0	10	146	<10	156	2.2	.01	.14	.06	310
MAY 30...	34	10	8.0	102	10	116	1.7	.02	.12	.10	380
AUG 08...	42	20	10	120	6	--	1.3	.20	.05	.07	280

DATE	TIME	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
AUG 08...	1500	<3	<10	<10	<50	<10	50	80

01472174 PICKERING CREEK NEAR CHESTER SPRINGS, PA

LOCATION.--Lat 40°05'22", long 75°37'50", Chester County, Hydrologic Unit 02040203, on left bank 30 ft (9.1 m) downstream from bridge on Horseshoe Trail Road, 0.45 mi (0.72 km) downstream from unnamed tributary, and 0.75 mi (1.21 km) southwest of Chester Springs.

DRAINAGE AREA.--5.98 mi² (15.49 km²).

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 280 ft (85 m), from topographic map. Prior to Aug. 11, 1967, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--11 years, 10.6 ft³/s (0.300 m³/s), 24.06 in/yr (611 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) June 22, 1972, gage height, 5.21 ft (1.588 m), from rating curve extended above 700 ft³/s (19.8 m³/s); minimum, 0.87 ft³/s (0.025 m³/s) Sept. 1, 2, 1969, gage height, 0.94 ft (0.287 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 220 ft³/s (6.23 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)	Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)
Nov. 8	0315	491	13.9	4.49	1.369	Mar. 20	2245	812	23.0	4.74	1.445
Dec. 18	1500	511	14.5	4.51	1.375	Mar. 26	2045	500	14.2	4.50	1.372
Jan. 9	0415	428	12.1	4.42	1.347	Mar. 27	0715	347	9.83	4.31	1.314
Jan. 25	1800	419	11.9	4.41	1.344	May 9	2000	260	7.36	4.16	1.268
Jan. 26	0730	*1,140	32.3	*4.91	1.497	May 14	1230	361	10.2	4.33	1.320
Mar. 14	1715	866	24.5	4.77	1.454	July 3	1800	396	11.2	4.38	1.335
Mar. 15	1530	286	8.10	4.21	1.283	Aug. 28	0630	286	8.10	4.21	1.283

Minimum discharge, 2.5 ft³/s (0.071 m³/s) Aug. 23, 24, 25; minimum gage height, 1.48 ft (0.451 m) Oct. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	5.7	39	10	16	9.4	16	9.4	14	6.3	6.5	14
2	4.9	5.9	13	9.4	14	9.4	16	9.2	13	6.2	5.7	5.5
3	4.5	11	11	8.8	13	9.2	16	9.0	14	111	5.2	4.5
4	4.2	14	10	9.0	12	9.0	16	9.6	16	26	5.2	3.9
5	4.0	9.6	13	9.0	11	12	21	11	14	16	7.5	3.6
6	4.2	8.9	14	8.8	17	10	16	10	13	12	6.8	3.4
7	3.9	69	10	8.6	16	9.0	17	9.8	13	10	5.9	3.1
8	3.9	138	8.5	26	15	8.0	15	10	15	9.0	5.2	3.4
9	12	13	6.8	130	14	8.2	14	51	13	8.1	4.4	3.5
10	6.0	11	7.0	31	13	8.4	13	16	12	7.8	4.0	3.2
11	5.3	14	7.6	15	12	10	12	11	11	7.6	4.0	3.4
12	4.8	8.7	7.8	14	11	14	14	9.8	10	6.6	4.2	3.7
13	4.5	7.6	7.6	15	10	39	13	8.9	13	6.3	3.9	3.6
14	8.5	7.1	22	52	11	210	12	126	11	6.3	3.6	3.4
15	8.5	6.8	19	18	12	101	11	37	10	7.8	3.5	3.8
16	26	6.5	12	15	12	31	10	34	9.4	6.8	3.4	4.9
17	17	10	11	17	11	25	10	36	9.2	7.0	3.2	4.4
18	8.5	8.7	166	71	11	22	9.8	32	9.4	6.2	3.0	3.7
19	7.6	7.0	62	17	11	58	21	25	8.9	5.6	2.9	8.3
20	6.8	6.5	26	38	10	46	26	22	8.3	5.3	2.9	4.5
21	6.5	6.5	91	25	10	34	14	20	19	5.0	2.8	3.9
22	6.0	6.8	25	14	10	30	13	18	17	4.8	2.8	4.0
23	5.9	19	19	13	10	22	12	17	12	4.3	3.0	3.8
24	5.6	10	17	12	10	19	12	28	9.8	4.0	2.6	3.6
25	5.5	11	31	144	9.8	16	11	22	8.7	6.3	2.7	3.5
26	6.3	47	16	500	9.6	135	11	19	8.1	4.8	2.8	3.2
27	7.3	12	12	47	9.6	110	11	17	9.6	5.5	6.8	3.1
28	6.6	10	12	29	9.4	30	10	17	8.3	8.0	59	3.1
29	6.2	11	12	23	---	23	10	16	7.3	5.5	6.8	2.9
30	5.9	13	11	19	---	19	9.8	16	6.8	4.9	4.8	2.8
31	5.7	---	10	17	---	17	---	14	---	8.0	6.6	---
TOTAL	217.4	515.3	729.3	1365.6	330.4	1103.6	412.6	690.7	343.8	339.0	190.9	125.7
MEAN	7.01	17.2	23.5	44.1	11.8	35.6	13.8	22.3	11.5	10.9	6.16	4.19
MAX	26	138	166	500	17	210	26	126	19	111	59	14
MIN	3.9	5.7	6.8	8.6	9.4	8.0	9.8	8.9	6.8	4.0	2.6	2.8
CFSM	1.17	2.88	3.93	7.38	1.97	5.95	2.31	3.73	1.92	1.82	1.03	.70
IN.	1.35	3.21	4.54	8.49	2.05	6.86	2.57	4.30	2.14	2.11	1.19	.78

CAL YR 1977 TOTAL 3443.6 MEAN 9.43 MAX 166 MIN 1.8 CFSM 1.58 IN 21.42
WTR YR 1978 TOTAL 6364.3 MEAN 17.4 MAX 500 MIN 2.6 CFSM 2.91 IN 39.58

01472186 PIGEON RUN AT RAPPS CORNER, PA

LOCATION.--Lat 40°04'58", long 75°35'31", Chester County, Hydrologic Unit 02040203, on left bank 5 ft (2 m) upstream from Yellow Springs Road, 0.6 mi (1.0 km) southeast of Rapps Corner, 1.6 mi (2.6 km) southeast of Chester Springs and 3 mi (4.8 km) west of Devault, Pa.

DRAINAGE AREA.--1.06 mi² (2.75 km²).

PERIOD OF RECORD.--March 1974 to September 1978 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 280 ft (85 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 109 ft³/s (3.09 m³/s) July 13, 14, 1975, gage height, 9.01 ft (2.746 m), from rating curve extended above 35 ft³/s (1.0 m³/s); minimum, 0.32 ft³/s (0.009 m³/s) Aug. 29, 1974; minimum gage height, 5.06 ft (1.542 m) on many days in August and September 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 30 ft³/s (0.85 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Oct. 16	1945	57	1.61	7.35	2.240	Mar. 14	1550	46	1.30	7.02	2.140
Nov. 7	2400	68	1.93	7.68	2.341	Mar. 26	1915	54	1.53	7.27	2.216
Dec. 18	1330	59	1.67	7.42	2.262	Mar. 27	0655	40	1.13	6.82	2.079
Dec. 21	0645	32	0.91	6.56	1.999	May 14	0510	39	1.10	6.79	2.070
Jan. 9	0225	59	1.67	7.43	2.265	May 14	1115	49	1.39	7.12	2.170
Jan. 26	0645	*64	1.81	*7.56	2.304	Aug. 28	0435	45	1.27	7.00	2.134

Minimum discharge, 0.38 ft³/s (0.011 m³/s) Oct. 4, 5, 6; minimum gage height, 5.29 ft (1.612 m) Nov. 19, 20, 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	.99	6.9	3.4	3.6	1.8	3.9	2.0	2.1	1.2	1.7	1.3
2	.43	.99	3.4	3.4	3.4	1.8	3.6	2.0	2.1	1.3	1.6	.88
3	.40	1.7	3.1	3.3	3.3	1.8	3.6	2.0	2.2	7.4	1.5	.88
4	.40	1.7	3.0	3.1	3.1	1.7	3.7	2.1	2.2	3.0	1.5	.78
5	.40	1.2	3.6	3.1	3.0	2.0	4.1	2.5	2.1	2.1	1.7	.78
6	.40	1.2	3.4	3.1	3.4	1.8	3.4	2.1	2.0	1.8	2.0	.78
7	.40	11	3.0	3.3	3.0	1.7	3.6	2.0	2.0	1.7	1.6	.78
8	.40	11	2.8	4.6	2.7	1.6	3.1	2.0	2.1	1.6	1.5	.78
9	1.1	2.5	3.0	13	2.6	1.6	3.0	7.0	2.0	1.6	1.3	.78
10	.78	2.2	2.7	3.7	2.5	1.7	3.0	3.0	1.8	1.6	1.2	.68
11	.68	2.2	2.5	3.1	2.4	1.8	3.0	2.7	1.7	1.5	1.1	.68
12	.58	1.7	2.7	3.0	2.3	2.2	3.5	2.7	1.7	1.5	1.2	1.1
13	.58	1.6	2.7	3.3	2.2	3.0	3.0	2.5	2.1	1.5	1.1	.78
14	1.1	1.5	4.6	5.1	2.2	11	2.7	14	1.8	1.6	1.1	.68
15	.88	1.3	3.9	3.3	2.2	9.4	2.5	4.6	1.7	1.6	.99	.78
16	4.4	1.3	3.1	3.0	2.1	4.4	2.5	5.3	1.7	1.8	.99	1.3
17	2.5	1.6	3.0	3.6	2.1	3.6	2.5	4.6	1.7	1.7	.99	.99
18	1.5	1.5	18	6.9	2.1	3.1	2.5	4.9	1.6	1.5	.99	.78
19	1.3	1.3	8.2	3.6	2.1	5.4	5.0	3.6	1.6	1.3	.99	1.5
20	1.1	1.2	5.1	5.4	2.0	5.1	4.5	3.1	1.5	1.3	.88	.88
21	1.1	1.2	12	2.8	2.0	6.7	3.0	2.8	2.5	1.2	.88	.78
22	.99	1.3	5.1	2.7	1.9	5.4	2.5	2.7	2.0	1.2	.88	.88
23	.99	3.0	4.4	2.7	1.8	4.1	2.3	2.7	1.6	1.2	.78	.78
24	.99	1.7	4.2	2.5	1.8	3.7	2.3	4.8	1.6	1.2	.78	.78
25	.99	2.5	5.1	11	2.0	3.3	2.2	3.0	1.5	1.5	.88	.68
26	1.1	6.3	3.9	31	2.0	14	2.1	2.7	1.5	1.3	.88	.68
27	1.3	3.0	3.7	8.6	1.8	14	2.1	2.5	1.6	1.6	2.0	.68
28	1.1	2.7	3.6	5.0	1.8	6.0	2.0	2.5	1.3	1.7	4.2	.68
29	.99	2.7	3.4	4.5	---	4.9	2.0	2.4	1.3	1.3	.99	.68
30	.99	3.3	3.4	3.9	---	4.4	2.0	2.4	1.3	1.2	.88	.68
31	.99	---	3.6	3.7	---	4.1	---	2.2	---	2.0	1.3	---
TOTAL	31.29	77.38	141.1	162.7	67.4	137.1	89.2	105.4	53.9	54.0	40.38	25.19
MEAN	1.01	2.58	4.55	5.25	2.41	4.42	2.97	3.40	1.80	1.74	1.30	.84
MAX	4.4	11	18	31	3.6	14	5.0	14	2.5	7.4	4.2	1.5
MIN	.40	.99	2.5	2.5	1.8	1.6	2.0	2.0	1.3	1.2	.78	.68
CFSM	.95	2.43	4.29	4.95	2.27	4.17	2.80	3.21	1.70	1.64	1.23	.79
IN.	1.10	2.71	4.95	5.70	2.36	4.81	3.13	3.70	1.89	1.89	1.42	.88

CAL YR 1977 TOTAL 619.17 MEAN 1.70 MAX 18 MIN .40 CFSM 1.60 IN 21.71
WTR YR 1978 TOTAL 985.04 MEAN 2.70 MAX 31 MIN .40 CFSM 2.55 IN 34.54

01473000 PERKIOMEN CREEK AT GRATERFORD, PA

LOCATION.--Lat 40°13'46", long 75°27'07", Montgomery County, Hydrologic Unit 02040203, on left bank 1,650 ft (503 m) upstream from highway bridge at Graterford, 0.5 mi (0.8 km) upstream from Landis Brook and 2.5 mi (4.0 km) north of Collegeville. Water-quality sampling site 1,710 ft (521 m) downstream.

DRAINAGE AREA.--279 mi^2 (723 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1914 to current year. Monthly discharge only for some periods, published in WSP 1302. Prior to October 1950, published as "at Graters Ford".

REVISED RECORDS.--WSP 756: Drainage area. WSP 1171: 1935(M). WSP 1302: 1915-16, 1927-29. WSP 1382: 1932-33, 1935, 1937, 1942, 1947, 1948(M), 1949(P), 1950(M), 1951-52(P).

GAGE.--Water-stage recorder. Datum of gage is 112.66 ft (34.339 m) National Geodetic Vertical Datum of 1929. June 1914 to Sept. 6, 1921, nonrecording gage at site 1,650 ft (503 m) downstream at datum 3.29 ft (1.003 m) lower. Sept. 7, 1921 to Sept. 13, 1927, nonrecording gage at present site and datum.

REMARKS.--Records good. Some regulation by Green Lane Reservoir 10.5 mi (16.9 km) upstream since December 21, 1956 (see p.237).

AVERAGE DISCHARGE.--64 years, 385 ft^3/s (10.90 m^3/s), 18.74 in/yr (476 mm/yr), adjusted for storage since December 1956.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,900 ft^3/s (1,130 m^3/s) July 9, 1935, gage height, 18.26 ft (5.566 m), from rating curve extended above 12,000 ft^3/s (340 m^3/s) on basis of slope-area measurement at gage height 16.23 ft (4.947 m); minimum, 4.7 ft^3/s (0.13 m^3/s) Oct. 5, 1941; minimum daily, 5.6 ft^3/s (0.16 m^3/s) Oct. 5, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,100 ft^3/s (598 m^3/s) Jan. 26, gage height, 13.03 ft (3.97 m); minimum, 52 ft^3/s (1.47 m^3/s) Oct. 7, 8, gage height, 1.07 ft (0.326 m); minimum daily, 54 ft^3/s (1.53 m^3/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	101	4750	280	426	193	531	181	255	113	275	752
2	83	102	1310	270	396	201	426	165	232	90	189	289
3	84	105	726	246	340	205	379	162	237	634	131	191
4	67	116	538	255	345	214	464	162	483	2110	135	146
5	61	124	546	275	319	189	511	209	270	497	155	117
6	56	114	1400	237	265	173	408	237	223	265	193	101
7	55	2570	642	241	345	177	439	218	189	218	1030	93
8	54	5100	385	345	373	162	340	193	241	181	426	85
9	142	1240	373	6330	340	155	289	531	237	155	237	91
10	351	695	275	1180	319	169	270	452	197	138	169	89
11	165	1200	289	611	309	218	270	265	155	138	185	84
12	128	618	280	457	309	345	295	232	135	113	634	87
13	104	444	241	402	289	1060	275	218	227	100	1700	165
14	106	343	842	1490	246	3890	265	2370	232	90	373	103
15	755	301	2770	717	299	5420	232	1570	158	135	237	95
16	608	274	946	451	260	2610	218	1310	131	162	189	111
17	2220	381	604	379	223	1180	210	2820	125	189	158	94
18	668	970	5140	1610	275	965	214	3070	125	218	131	83
19	451	458	3760	985	241	1450	241	1250	125	135	111	164
20	552	333	1450	517	230	2190	1270	717	113	108	100	209
21	340	292	5240	574	220	2070	682	517	111	92	92	128
22	250	330	1950	483	210	2670	416	373	304	85	85	103
23	203	952	936	408	205	1630	275	309	260	80	80	93
24	168	777	692	385	200	1380	270	3810	169	76	80	84
25	152	536	1500	1760	193	879	255	2530	128	74	76	78
26	144	3330	955	14600	205	3660	241	907	116	70	78	74
27	154	991	490	3070	197	8920	232	567	148	61	76	71
28	144	605	470	1210	201	2300	223	451	148	76	237	69
29	128	511	373	796	---	1190	205	373	116	80	477	68
30	117	889	367	596	---	787	193	325	131	70	227	66
31	105	---	294	504	---	626	---	280	---	214	197	---
TOTAL	8686	24802	40534	41664	7780	47278	10539	26774	5721	6767	8463	3983
MEAN	280	827	1308	1344	278	1525	351	864	191	218	273	133
MAX	2220	5100	5240	14600	426	8920	1270	3810	483	2110	1700	752
MIN	54	101	241	237	193	155	193	162	111	61	76	66
MEAN≠	291	841	1297	1345	277	1527	348	865	190	219	274	127
CFSM≠	1.04	3.01	4.65	4.82	.99	5.47	1.25	3.10	.68	.78	.98	.46
IN.≠	1.21	3.36	5.36	5.56	1.03	6.31	1.39	3.57	.76	.90	1.13	.51

CAL YR 1977 TOTAL 179324 MEAN 491 MAX 9440 MIN 38 MEAN≠ 491 CFSM≠ 1.76 IN.≠ 23.92
WTR YR 1978 TOTAL 232991 MEAN 638 MAX 14600 MIN 54 MEAN≠ 639 CFSM≠ 2.29 IN.≠ 31.09

≠ Adjusted for change in contents in Green Lane Reservoir.

01473000 PERKIOMEN CREEK AT GRATERFORD, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, FEBRUARY TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
FEB 23...	1500	9813	9813	205	275	--	--	--	92	--	23	9.3
AUG 03...	1030	9813	9813	131	290	8.2	23.0	7.4	89	0	20	10

DATE	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
FEB 23...	56	28	30	130	2	140	3.0	.06	.50	.23	180
AUG 03...	70	25	26	210	30	--	1.6	.10	.16	1.3	260

01473120 SKIPPACK CREEK NEAR COLLEGEVILLE, PA

LOCATION.--Lat 40°09'52", long 75°26'01", Montgomery County, Hydrologic Unit 02040203, on right bank 60 ft (18 m) downstream from two-span highway bridge, 1.5 mi (2.4 km) upstream from mouth, and 2 mi (3 km) southeast of Collegeville.

DRAINAGE AREA.--53.7 mi^2 (139.1 km^2).

PERIOD OF RECORD.--April 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 99.03 ft (30.184 m) National Geodetic Vertical Datum of 1929. Prior to June 15, 1967, nonrecording gage at site 60 ft (18 m) upstream at same datum.

REMARKS.--Records fair except those for winter periods, which are poor.

AVERAGE DISCHARGE.--12 years, 80.4 ft^3/s (2.277 m^3/s), 20.33 in/yr (516 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,400 ft^3/s (1,140 m^3/s) Sept. 13, 1971, gage height, 22.5 ft (6.86 m), from floodmark, from rating curve extended above 8,400 ft^3/s (238 m^3/s) on basis of slope-area measurement of peak flow; minimum, 0.1 ft^3/s (0.003 m^3/s) Sept. 12, 13, 1966; minimum gage height, 0.79 ft (0.241 m) Oct 3, 1968, July 31, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	0215	3,980	113	8.48	2.585	Jan. 26	0930	*11,400	323	*13.16	4.011
Nov. 26	0330	2,360	66.8	6.77	2.063	Mar. 14	1800	4,890	138	9.27	2.825
Dec. 1	0545	2,450	69.4	6.89	2.100	Mar. 26	2230	3,150	89.2	7.65	2.332
Dec. 18	1645	5,780	164	9.94	3.030	Mar. 27	1000	2,830	80.1	7.33	2.234
Dec. 21	1015	2,590	73.3	7.06	2.152	Aug. 11	1800	4,210	119	8.70	2.652
Jan. 9	0545	3,760	106	8.26	2.518	Aug. 12	2315	7,030	199	10.77	3.283
Jan. 25	1630	3,540	100	8.04	2.451						

Minimum daily discharge, 5.6 ft^3/s (0.16 m^3/s) Oct. 8. July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	12	888	42	62	16	68	16	37	7.9	33	125
2	8.0	12	180	39	56	17	56	16	30	6.5	15	44
3	8.6	12	116	36	50	25	51	15	28	318	12	32
4	7.8	14	90	38	48	37	55	16	37	164	11	25
5	7.0	14	129	42	46	26	81	29	24	47	14	20
6	6.6	13	180	27	44	19	55	23	20	31	21	18
7	6.0	720	94	30	50	15	60	17	18	22	15	16
8	5.6	1170	68	82	60	12	52	16	28	17	12	14
9	20	171	68	1310	52	10	44	54	29	15	11	15
10	62	112	57	188	45	11	40	54	17	13	11	13
11	25	144	50	120	40	44	39	31	14	21	734	11
12	10	85	45	80	35	273	44	25	12	12	991	12
13	9.0	68	39	70	30	580	35	22	46	10	555	27
14	59	57	179	486	29	1310	30	243	22	9.0	107	13
15	215	53	346	118	22	667	26	117	14	22	68	15
16	71	47	123	99	25	222	24	203	13	13	53	16
17	131	124	93	75	28	154	22	309	12	16	43	12
18	70	129	1910	538	26	138	22	349	11	21	34	9.6
19	65	64	512	144	23	402	32	150	10	11	27	16
20	60	51	197	77	22	238	135	96	9.4	9.6	23	20
21	40	46	1130	104	20	230	58	72	14	8.0	18	15
22	29	48	237	95	19	180	46	58	52	7.6	16	13
23	22	205	131	80	18	140	37	50	15	7.0	15	12
24	18	113	102	70	18	125	34	470	11	6.6	14	11
25	17	96	188	930	17	105	30	259	9.7	6.2	14	11
26	17	750	101	4160	17	735	27	112	8.6	6.0	13	10
27	21	135	84	288	16	1380	25	79	12	5.6	14	9.8
28	22	97	83	130	16	261	22	66	9.7	27	152	9.6
29	17	91	75	100	---	139	20	56	8.1	6.8	71	9.2
30	15	180	55	80	---	95	18	50	14	11	28	9.0
31	14	---	49	70	---	78	---	44	---	90	37	---
TOTAL	1086.0	4833	7599	9748	934	7684	1288	3117	585.5	967.8	3182	583.2
MEAN	35.0	161	245	314	33.4	248	42.9	101	19.5	31.2	103	19.4
MAX	215	1170	1910	4160	62	1380	135	470	52	318	991	125
MIN	5.6	12	39	27	16	10	18	15	8.1	5.6	11	9.0
CFSM	.65	3.00	4.56	5.85	.62	4.62	.80	1.88	.36	.58	1.92	.36
IN.	.75	3.35	5.26	6.75	.65	5.32	.89	2.16	.41	.67	2.20	.40

CAL YR 1977 TOTAL 33228.8 MEAN 91.0 MAX 1970 MIN 2.2 CFSM 1.70 IN 23.02
WTR YR 1978 TOTAL 41607.5 MEAN 114 MAX 4160 MIN 5.6 CFSM 2.12 IN 28.82

01473800 SCHUYLKILL RIVER AT MANAYUNK, PHILADELPHIA, PA

LOCATION.--Lat 40°01'41", long 75°13'44", Philadelphia County, Hydrologic Unit 02040203, at Green Lane Avenue Bridge, 5.5 mi (8.8 km) upstream from gaging station at Fairmount Dam, and 14.2 mi (22.3 km) upstream from mouth.

DRAINAGE AREA.--1,830 mi^2 (4,740 km^2), at Fairmount Dam.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: November 1947 to current year.

REMARKS.--Mean discharges given are for 01474500 Schuylkill River at Philadelphia (Fairmount Dam). Daily records do not include water diverted by the city of Philadelphia for municipal water supply. Unpublished records of temperature of sediment samples available in the district office at Harrisburg.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 4,910 mg/L Dec. 30, 1948; minimum daily, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 650,000 tons (590,000 tonnes) (estimated) Aug 19, 1955; minimum daily, less than 0.05 ton (0.04 tonne) Sept. 2, 1966.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily, 977 mg/L Jan. 26; minimum daily, 1 mg/L Apr. 11, 15.
SEDIMENT LOADS: Maximum daily, 147,000 tons (133,000 tonnes) Jan. 26; minimum daily, 7.0 tons (6.4 tonnes) Apr. 15.

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	1120	14	42	1300	11	39	13500	148	6210
2	1150	13	40	1260	10	34	12500	111	3750
3	1900	12	62	1250	10	34	8660	77	1800
4	1520	16	66	1530	14	58	6710	55	996
5	1250	15	51	1850	17	85	5640	30	457
6	1100	15	45	1630	20	88	7630	35	721
7	1030	15	42	7410	205	4790	6510	28	492
8	1000	14	38	21600	539	32900	5020	19	258
9	1600	21	91	12500	225	7590	4390	15	178
10	3540	35	379	8090	75	1640	3920	10	106
11	3920	32	339	8560	105	2430	3280	10	89
12	2720	23	169	8960	90	2180	2890	11	86
13	2110	18	103	6670	30	540	2790	10	75
14	1880	18	91	5240	25	354	3260	20	176
15	3240	23	201	4280	21	243	9400	105	2660
16	4810	38	494	3700	19	190	7470	109	2200
17	7460	151	3260	3430	18	167	6030	87	1420
18	8610	199	4700	4870	35	460	14800	352	20200
19	6240	113	1900	3630	30	294	20700	240	13400
20	5320	48	689	2870	28	217	12300	70	2320
21	4210	31	352	2510	26	176	19100	120	7450
22	3410	25	230	2440	24	158	17800	105	5050
23	2900	16	125	4040	25	273	12600	60	2040
24	2490	14	94	4220	25	285	9610	30	778
25	2180	12	71	3260	23	202	8990	22	534
26	1970	14	74	9460	110	2810	9180	13	322
27	2140	16	92	6410	84	1450	6700	12	217
28	2060	19	106	4720	50	637	5730	12	186
29	1750	18	85	4100	38	421	4970	10	134
30	1530	15	62	4460	42	506	4550	10	123
31	1400	12	45	---	---	---	4230	8	91
TOTAL	87560	---	14138	156250	---	61251	268860	---	74519

01473800 SCHUYLKILL RIVER AT MANAYUNK, PHILADELPHIA, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	3920	7	74	6790	15	275	1690	3	14
2	3660	7	69	5950	10	161	1630	2	8.8
3	3340	6	54	4630	10	125	1640	2	8.9
4	2890	6	47	3850	9	94	1520	3	12
5	2770	5	37	3400	8	73	1370	2	7.4
6	2750	6	45	3350	8	72	1420	3	12
7	2700	5	36	3220	7	61	1410	4	15
8	2840	7	54	3540	7	67	1440	3	12
9	19200	386	24800	3170	6	51	1440	2	7.8
10	18700	240	12100	2860	8	62	1430	2	7.7
11	10400	50	1400	2660	10	72	1540	3	12
12	7720	40	834	2600	13	91	2190	7	41
13	6240	20	337	2520	14	95	4070	38	418
14	9280	40	1000	2540	15	103	10800	375	16900
15	7020	15	284	2420	12	78	23800	605	38900
16	4960	11	147	2230	9	54	20000	250	13500
17	4360	9	106	2160	8	47	11400	95	2920
18	8830	45	1070	2120	8	46	8480	52	1190
19	6950	25	469	2090	7	40	7840	76	1610
20	4930	15	200	1940	8	42	10600	107	3060
21	4400	10	119	1830	9	44	10200	84	2310
22	4180	8	90	1870	11	56	12200	105	3460
23	3570	6	58	1770	10	48	10600	78	2230
24	3200	5	43	1730	8	37	9700	47	1230
25	6080	50	821	1800	7	34	8690	44	1030
26	46400	977	147000	1870	8	40	10600	105	3010
27	36400	755	74200	1850	7	35	39000	803	84900
28	14700	290	11500	1680	7	32	28400	335	25700
29	10700	75	2170	---	---	---	17800	122	5860
30	8310	21	471	---	---	---	12800	61	2110
31	7530	17	346	---	---	---	10100	46	1250
TOTAL	278930	---	279981	78440	---	2035	285800	---	211746.6

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	8330	35	787	1730	3	14	3110	6	50
2	7020	30	569	1650	3	13	2760	6	45
3	5920	23	368	1570	6	25	2470	6	40
4	5430	18	264	1570	8	34	3210	8	69
5	5720	26	402	1850	7	35	2950	5	40
6	5020	14	190	1980	4	21	2290	4	25
7	4600	8	99	1890	4	20	2290	8	49
8	4390	6	71	1730	5	23	2380	6	39
9	3880	4	42	2950	12	96	2710	6	44
10	3470	2	19	4130	25	279	2760	9	67
11	3370	1	9.1	2520	17	116	2470	11	73
12	3470	3	28	2020	14	76	1980	13	69
13	3160	2	17	1850	22	110	2330	15	94
14	2800	2	15	6440	246	6920	2380	13	84
15	2610	1	7.0	17400	240	11300	1940	11	58
16	2380	2	13	12700	113	3870	1610	12	52
17	2290	3	19	14300	105	4050	1530	11	45
18	2200	3	18	16300	120	5280	1530	11	45
19	2560	4	28	11700	72	2270	1420	9	35
20	5250	20	283	9110	40	984	1310	9	32
21	4660	16	201	7210	30	584	1380	19	71
22	3420	7	65	5890	21	334	2520	23	156
23	2850	4	31	4910	17	225	1980	18	96
24	2560	4	28	9480	70	2100	1530	14	58
25	2470	4	27	12700	100	3430	1310	12	42
26	2290	4	25	7170	35	678	1170	12	38
27	2200	4	24	5400	22	321	1210	12	39
28	2110	6	34	4700	10	127	1210	14	46
29	1940	4	21	4190	7	79	1100	18	53
30	1810	3	15	3810	6	62	977	21	55
31	---	---	---	3420	6	55	---	---	---
TOTAL	110180	---	3719.1	184270	---	43531	59817	---	1789

01473800 SCHUYLKILL RIVER AT MANAYUNK, PHILADELPHIA, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	914	22	54	1850	32	160	2520	26	177
2	914	23	57	1620	28	107	2110	26	148
3	3260	51	901	1140	25	77	1310	28	99
4	9530	141	3630	1010	20	55	1070	30	87
5	3690	80	797	1210	19	62	977	20	53
6	2110	38	216	1460	22	87	852	13	30
7	1530	20	83	3470	35	328	792	12	26
8	1280	19	66	5190	31	434	706	17	32
9	1170	15	47	6530	43	758	763	22	45
10	1070	17	49	3910	23	243	763	18	37
11	1170	19	60	3310	50	447	706	14	27
12	1070	18	52	3630	185	1810	734	14	28
13	883	15	36	8580	315	7300	914	15	37
14	852	16	37	3210	170	1470	852	18	41
15	914	18	44	2110	43	245	763	28	58
16	1730	21	98	1690	22	100	852	34	78
17	1890	18	92	1420	22	84	852	31	71
18	1460	17	67	1210	25	82	822	26	58
19	1100	15	45	1040	26	73	822	27	60
20	914	13	32	946	25	64	1100	18	53
21	822	11	24	883	18	43	1210	12	39
22	734	6	12	792	13	28	946	13	33
23	651	5	8.8	734	14	28	883	13	31
24	625	7	12	706	25	48	1010	13	35
25	625	11	19	651	31	54	852	13	30
26	678	12	22	678	26	48	734	12	24
27	792	15	32	763	18	37	706	11	21
28	1380	24	89	5310	90	1290	678	14	26
29	852	18	41	3580	35	338	651	12	21
30	734	16	32	2330	36	226	598	12	19
31	977	21	55	1570	30	127	---	---	---
TOTAL	46321	---	6809.8	72333	---	16253	28548	---	1524
YEAR	1649309		717216.5						

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
MAR 15...	1015	22200	4.5	592	35500	36	55

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM
MAR 15...	72	85	90	94	99	100

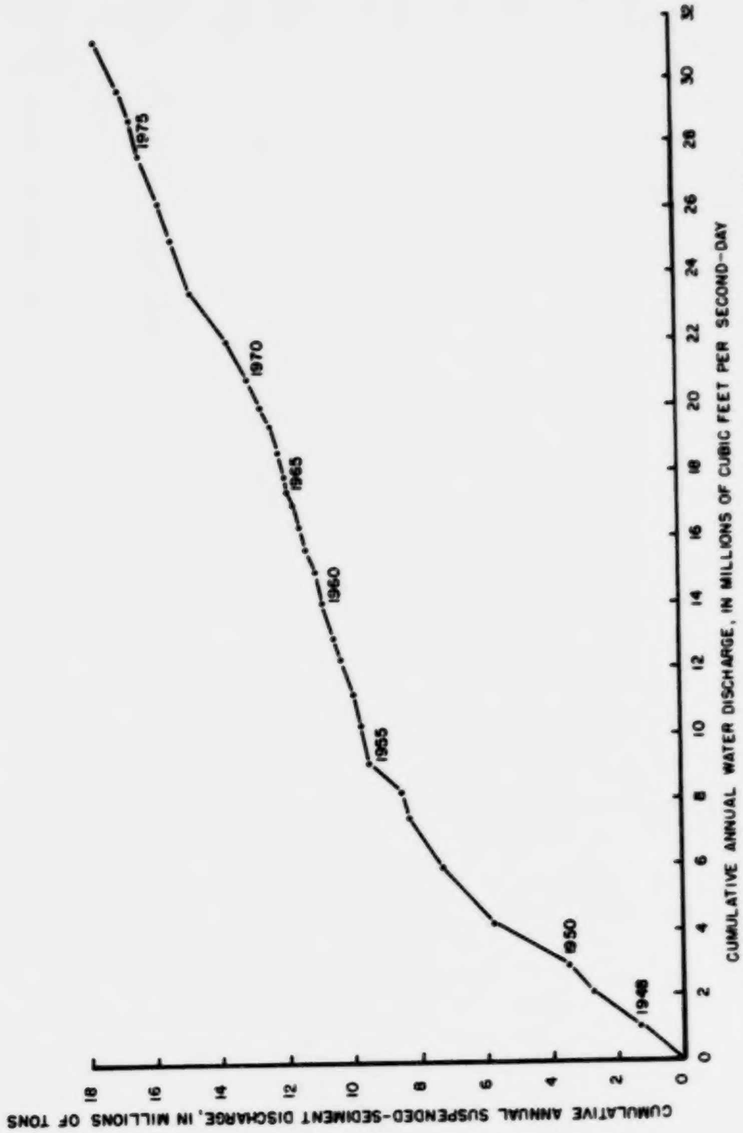

FIGURE 10- Double mass accumulation of annual suspended - sediment discharge versus annual water discharge, Schuylkill River at Monayunk, Philadelphia, Pa

Table 2.--Suspended sediment concentration-duration table, Scnuylkill River at Manayunk, Philadelphia, PA

Period	Mean daily concentration, in milligrams per liter that was equaled or exceeded for indicated percentage of time													
	1	2	5	10	20	30	40	50	60	70	80	90	95	99
1978	540	345	200	99	41	27	21	17	14	12	8	5	3	2
1960-78	442	272	127	59	28	21	17	15	13	11	9	7	5	4

01473870 PINE RUN TRIBUTARY NEAR AMBLER, PA

LOCATION.--Lat 40°08'56", long 75°10'50", Montgomery County, Hydrologic Unit 02040203, on left bank 20 ft (6 m) upstream from Susquehanna Road, 1.5 mi (2.4 km) east of Fort Washington, 2.2 mi (3.5 km) west of Ambler, and 3 mi (4.8 km) northwest of Roslyn.

DRAINAGE AREA.--1.18 mi² (3.06 km²).

PERIOD OF RECORD.--October 1973 to September 1978 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 200 ft (61 m), from topographic map.

REMARKS.--Records fair except those for winter periods and those below 0.5 ft³/s (0.014 m³/s), which are poor.

AVERAGE DISCHARGE.--5 years, 1.52 ft³/s (0.043 m³/s), 17.54 in/yr (446 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 450 ft³/s (12.7 m³/s) July 13, 1975, gage height, unknown, from flow-through-culvert study; no flow many days in January and July 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.70 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	0710	97	2.75	2.63	0.802	Mar. 26	2055	71	2.01	2.39	0.728
Nov. 8	0025	169	4.79	3.30	1.006	May 17	2025	95	2.69	2.61	0.796
Dec. 18	1335	115	3.26	2.80	0.853	May 18	0230	60	1.70	2.29	0.698
Dec. 21	0700	138	3.91	3.02	0.920	May 24	0830	190	5.38	3.49	1.064
Jan. 9	Unknown	Unknown		Unknown		June 8	1510	122	3.46	2.87	0.875
Jan. 26	0600	*217	6.15	*3.74	1.140	July 3	1825	134	3.79	2.98	0.908
Mar. 14	1555	137	3.88	3.01	0.917	Aug. 28	0625	213	6.03	3.70	1.128

Minimum discharge, 0.01 ft³/s (<0.001 m³/s) Oct. 4, 5, 6, 7, 8, gage height, 1.07 ft (0.326 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.09	7.9	1.2	3.0	.78	2.6	.46	2.2	.36	.46	.20
2	.03	.09	1.8	1.1	2.8	.77	2.1	.46	1.9	.36	.39	.19
3	.02	.09	1.6	.92	2.5	.77	1.9	.41	1.8	33	.48	.18
4	.01	.12	1.4	.84	2.1	.71	1.9	.51	1.9	3.7	.72	.17
5	.01	.10	2.3	.84	2.9	.65	2.2	.51	1.7	1.7	.38	.16
6	.01	.09	1.5	.84	2.7	.62	1.7	.41	1.4	1.3	.64	.15
7	.01	32	1.0	.90	2.0	.57	1.7	.36	2.8	1.1	.31	.15
8	.01	25	.90	1.0	1.8	.56	1.4	.36	9.4	1.0	.26	.15
9	.32	1.6	.90	20	1.7	.57	1.3	2.1	1.9	.93	.23	.16
10	.05	1.3	.80	1.5	1.6	.59	1.2	.63	1.4	.91	.29	.15
11	.02	.89	.71	1.4	1.5	.83	1.2	.41	1.2	.80	2.8	.15
12	.02	.84	.71	1.4	1.4	1.8	1.1	.36	1.1	.71	2.0	.51
13	.02	.63	.77	2.1	1.5	4.9	1.0	.36	2.6	.71	.52	.22
14	.16	.56	2.5	7.8	1.3	25	.92	8.6	1.1	.81	.30	.14
15	3.6	.52	1.9	2.1	1.2	10	.84	1.2	.92	.87	.26	.17
16	.09	.50	1.0	1.7	1.2	3.0	.77	2.2	.92	4.4	.25	.15
17	.13	.85	.98	3.2	1.2	2.8	.77	9.4	.92	1.1	.24	.13
18	.06	.55	32	21	1.2	2.2	.70	12	.84	.77	.22	.15
19	.06	.44	5.1	3.4	1.2	5.7	1.2	3.2	.77	.59	.21	.16
20	.24	.40	3.4	11	1.2	2.8	2.1	2.6	.70	.54	.20	.16
21	.07	.42	37	2.4	1.1	3.2	.84	2.1	1.9	.51	.19	.13
22	.06	.43	4.0	2.1	1.1	3.6	.77	1.7	1.0	.47	.20	.13
23	.06	2.7	3.2	1.9	1.1	2.4	.70	1.5	.70	.44	.19	.16
24	.07	.81	2.6	1.7	1.0	2.1	.70	44	.63	.38	.18	.14
25	.07	1.1	3.2	22	1.1	1.8	.63	6.6	.57	.40	.19	.12
26	.09	3.8	1.9	85	1.1	15	.63	4.8	.57	.38	.18	.10
27	.20	1.1	1.7	9.9	.96	21	.63	4.0	.63	.98	.18	.10
28	.08	1.1	1.4	6.4	.92	4.8	.63	3.6	.51	.83	30	.09
29	.06	1.2	1.3	5.0	---	4.0	.57	3.2	.57	.37	2.1	.09
30	.07	1.8	1.3	4.1	---	3.4	.51	2.8	.51	.32	.20	.08
31	.08	---	1.3	3.6	---	2.8	---	2.4	---	.67	.26	---
TOTAL	5.81	81.12	128.07	228.34	44.38	129.72	35.21	123.24	45.06	61.41	45.03	4.74
MEAN	.19	2.70	4.13	7.37	1.59	4.18	1.17	3.98	1.50	1.98	1.45	.16
MAX	3.6	32	37	85	3.0	25	2.6	44	9.4	33	30	.51
MIN	.01	.09	.71	.84	.92	.56	.51	.36	.51	.32	.18	.08
CFSM	.16	2.29	3.50	6.25	1.35	3.54	.99	3.37	1.27	1.68	1.23	.14
IN.	.18	2.56	4.03	7.19	1.40	4.09	1.11	3.88	1.42	1.93	1.42	.15

CAL YR 1977 TOTAL 357.82 MEAN .98 MAX 37 MIN .00 CFSM .83 IN 11.27
WTR YR 1978 TOTAL 932.13 MEAN 2.55 MAX 85 MIN .01 CFSM 2.16 IN 29.36

01473895 WISSAHICKON CREEK AT AMBLER, PA

LOCATION.--Lat 40°09'29", long 75°13'59", Montgomery County, Hydrologic Unit 02040203, 255 ft (78 m) downstream from bridge on Mt. Pleasant Avenue in Ambler.

DRAINAGE AREA.--not available.

PERIOD OF RECORD.--November 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS (MG/L AS CACO3)
OCT									
05...	0930	9813	9813	700	8.6	13.0	8.3	--	184
NOV									
17...	1300	9813	9813	--	--	--	--	.6	--
DEC									
12...	0900	9813	9813	500	--	--	--	--	142
JAN									
11...	0930	9813	9813	440	--	--	--	--	115
FEB									
21...	1000	9813	9813	600	--	--	--	--	160
MAR									
20...	1400	9813	9813	300	--	--	--	--	78
APR									
14...	--	9813	9813	500	--	--	--	--	142
MAY									
08...	1430	9813	9813	600	8.6	12.0	8.6	2.2	146
JUN									
19...	1400	9813	9813	700	--	--	--	--	144
JUL									
20...	1315	9813	9813	500	--	--	--	--	150
AUG									
15...	1030	9813	9813	500	8.4	22.0	7.5	--	117

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	MAGNESIUM, DISSOLVED (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)
OCT									
05...	0	--	48	--	16	120	96	110	.1
NOV									
17...	--	--	--	--	--	92	--	--	--
DEC									
12...	--	34	--	15	--	90	80	59	.1
JAN									
11...	--	31	--	10	--	70	57	61	.1
FEB									
21...	--	40	--	15	--	92	100	74	--
MAR									
20...	--	21	--	6.6	--	50	34	37	.1
APR									
14...	--	39	--	13	--	88	108	55	--
MAY									
08...	0	43	--	10	--	100	98	40	--
JUN									
19...	--	43	--	9.9	--	108	130	60	--
JUL									
20...	--	42	--	12	--	90	100	66	--
AUG									
15...	0	36	--	7.0	--	86	50	47	--

01473895 WISSAHICKON CREEK AT AMBLER, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT									
05...	504	24	--	4.6	.05	.16	3.4	110	.05
NOV									
17...	420	--	--	2.2	.04	.13	1.5	--	--
DEC									
12...	376	2	378	2.5	.06	.16	.98	150	--
JAN									
11...	252	4	256	3.0	.06	.33	.84	319	.06
FEB									
21...	258	4	262	2.4	.07	1.1	1.9	140	--
MAR									
20...	250	8	258	1.8	.03	.28	.36	1500	.03
APR									
14...	384	384	396	2.0	.08	.23	1.6	160	--
MAY									
08...	448	14	--	2.8	.17	.66	1.4	140	--
JUN									
19...	486	6	492	1.9	.05	.20	2.0	250	--
JUL									
20...	404	18	422	2.2	.04	.09	2.1	220	--
AUG									
15...	360	<5	--	3.1	.05	.13	.62	210	--

01473950 WISSAHICKON CREEK AT BELLS MILL ROAD, PHILADELPHIA, PA

LOCATION.--Lat 40°04'50", long 75°13'35", Philadelphia County, Hydrologic Unit 02040203, on left bank 300 ft (91 m) upstream from Bells Mill Road, 0.5 mi (0.8 km) south of Mt. St. Joseph College in Philadelphia.

DRAINAGE AREA.--53.6 mi² (139 km²).

PERIOD OF RECORD.--October 1965 to September 1970, May 1974 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 108.58 ft (33.095 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record July 7 to Aug. 17, which are poor.

AVERAGE DISCHARGE.--9 years (water years 1966-70, 1975-78), 73.0 ft³/s (2.067 m³/s), 18.49 in/yr (470 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,360 ft³/s (123 m³/s) Dec. 21, 1973, gage height, 9.68 ft (2.950 m); minimum, 5.4 ft³/s (0.15 m³/s) July 27, 1966, gage height, 2.81 ft (0.856 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1973 reached a stage of 12.66 ft (3.859 m), from floodmarks, discharge, 8,100 ft³/s (229 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28.3 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	1315	1,530	43.3	6.48	1.975	Mar. 27	0145	1,550	43.9	6.51	1.984
Nov. 8	0645	2,230	63.2	7.42	2.262	Mar. 27	1245	1,510	42.8	6.46	1.969
Dec. 1	0530	1,020	28.9	5.68	1.731	May 14	1330	1,190	33.7	5.97	1.820
Dec. 18	1900	2,420	68.5	7.66	2.335	May 18	0500	1,120	31.7	5.85	1.783
Dec. 21	1145	1,940	54.9	7.06	2.152	May 24	1415	1,780	50.4	6.84	2.085
Jan. 9	0530	1,580	44.7	6.56	1.999	July 3	2315	2,150	60.9	7.33	2.234
Jan. 18	0215	1,040	29.5	5.72	1.743	Aug. 11	----	1,500	42.5	Unknown	
Jan. 26	1015	*4,280	121	*9.61	2.929	Aug. 28	0945	1,600	45.3	6.59	2.009
Mar. 14	2115	2,120	60.0	7.29	2.222						

Minimum discharge, 8.3 ft³/s (0.235 m³/s) Sept. 29, gage height, 2.95 ft (0.899 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	24	482	63	118	51	134	50	84	47	75	71
2	37	26	120	61	110	47	118	44	77	44	45	37
3	28	28	87	56	100	48	106	44	79	665	41	30
4	27	32	72	50	90	45	115	53	84	411	56	27
5	23	36	122	51	85	36	164	89	71	86	52	23
6	19	33	138	53	78	36	106	61	61	65	96	18
7	22	723	73	60	86	40	112	53	104	59	45	18
8	27	907	59	130	78	44	99	53	187	55	33	17
9	171	119	68	742	74	50	89	287	91	50	29	19
10	58	79	59	118	70	47	81	148	67	47	35	23
11	28	85	52	91	66	58	77	71	58	43	308	21
12	23	56	48	79	62	131	89	61	55	39	125	57
13	22	47	49	105	60	251	73	58	187	36	110	47
14	61	42	150	372	58	762	69	505	67	34	56	16
15	315	41	231	113	56	593	71	160	56	30	46	22
16	60	38	83	81	54	251	67	251	53	60	38	27
17	90	58	67	150	52	192	63	348	61	100	32	22
18	45	65	946	574	50	157	56	534	58	75	35	20
19	36	45	325	155	48	277	101	183	55	40	39	27
20	62	40	149	124	47	231	283	137	56	35	32	18
21	36	37	952	114	45	216	91	112	122	34	23	15
22	37	37	219	91	44	297	77	99	164	33	19	14
23	33	239	151	83	43	175	69	89	65	32	18	25
24	30	77	128	81	53	152	63	877	58	31	18	18
25	26	64	175	680	61	125	58	279	51	33	19	14
26	29	392	113	2290	61	454	58	175	47	35	19	11
27	65	91	90	335	58	1020	56	141	58	60	18	11
28	34	73	81	231	53	295	55	125	44	110	491	10
29	28	76	74	191	---	199	58	112	44	44	102	10
30	24	156	70	160	---	156	58	104	58	36	33	15
31	22	---	72	145	---	137	---	91	---	86	59	---
TOTAL	1550	3766	5505	7629	1860	6573	2716	5394	2322	2555	2133	703
MEAN	50.0	126	178	246	66.4	212	90.5	174	77.4	82.4	68.8	23.4
MAX	315	907	952	2290	118	1020	283	877	187	665	491	71
MIN	19	24	48	50	43	36	55	44	44	30	18	10
CFSM	.93	2.35	3.32	4.59	1.24	3.96	1.69	3.25	1.44	1.54	1.28	.44
IN.	1.08	2.61	3.82	5.29	1.29	4.56	1.88	3.74	1.61	1.77	1.48	.49

CAL YR 1977 TOTAL 25032.6 MEAN 71.0 MAX 1070 MIN 8.9 CFSM 1.33 IN 18.00
WTR YR 1978 TOTAL 42786.0 MEAN 117 MAX 2290 MIN 10 CFSM 2.18 IN 29.64

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA

LOCATION.--Lat 40°00'54", long 75°12'24", Philadelphia County, Hydrologic Unit 02040203, on left bank 100 ft (30 m) upstream from dam at Ridge Ave., 750 ft (229 m) upstream from mouth, 1,000 ft (305 m) northwest of Gustine Lake in Philadelphia.

DRAINAGE AREA.--64.0 mi² (166 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1897 to September 1903, January 1905 to July 1906, October 1965 to September 1970, May 1974 to current year. Prior to October 1965 published as "near Philadelphia".

REVISED RECORDS.--WSP 1302: 1905.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 26.41 ft (8.050 m) National Geodetic Vertical Datum of 1929. Prior to October 1965, water-stage recorder at about same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--10 years (water years 1898, 1966-70, 1975-78), 89.9 ft³/s (2.546 m³/s), 19.07 in/yr (484 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,600 ft³/s (130 m³/s) Aug. 23, 1974, gage height, 6.63 ft (2.021 m); minimum daily observed, 2.0 ft³/s (0.057 m³/s) July 18, 19, 1905.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1973 reached a stage of 7.92 ft (2.414 m), discharge, 6,870 ft³/s (195 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	1430	1,800	51.0	4.55	1.387	Mar. 27	0245	1,750	49.6	4.51	1.375
Nov. 8	0800	2,560	72.5	5.21	1.588	Mar. 27	1330	1,710	48.4	4.47	1.362
Dec. 18	2030	2,730	77.3	5.34	1.628	May 14	1445	1,280	36.2	4.06	1.237
Dec. 21	1330	2,300	65.1	4.99	1.521	May 18	0015	1,280	36.2	4.06	1.237
Jan. 9	0815	1,890	53.5	4.64	1.414	May 24	1545	2,040	57.8	4.77	1.454
Jan. 18	0545	1,250	35.4	4.03	1.228	July 4	0030	2,480	70.2	5.14	1.567
Jan. 26	1400	*4,420	125	*6.52	1.987	Aug. 11	2000	1,760	49.8	4.52	1.378
Mar. 14	2215	2,350	66.6	5.03	1.533	Aug. 28	0545	2,600	73.6	5.24	1.597

Minimum discharge, 26 ft³/s (0.74 m³/s) Oct. 7, gage height, 1.92 ft (0.585 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	32	557	84	135	62	142	57	99	49	89	100
2	44	34	138	81	124	57	127	51	93	46	56	57
3	39	38	104	75	114	60	116	49	93	706	53	51
4	34	40	90	68	105	57	118	60	98	601	71	46
5	34	40	127	68	98	47	160	95	88	102	68	44
6	29	40	171	69	95	45	112	69	78	80	108	40
7	28	883	91	76	107	51	113	60	137	71	58	39
8	32	1190	74	111	95	51	106	66	193	63	46	38
9	185	148	80	946	89	62	97	283	110	60	41	38
10	78	101	74	147	82	58	94	200	79	57	51	43
11	39	105	65	108	78	67	88	91	71	54	354	40
12	34	74	61	97	76	125	98	80	67	48	154	67
13	31	63	64	110	73	269	83	78	190	45	181	96
14	56	56	146	438	70	835	78	570	79	56	66	39
15	342	55	269	144	68	691	78	182	65	76	54	39
16	76	52	100	100	66	285	78	239	60	74	49	44
17	98	82	81	127	64	197	74	331	68	146	46	42
18	55	84	1090	739	61	167	67	615	67	65	41	40
19	46	56	416	200	59	261	110	192	62	49	46	45
20	76	51	173	147	56	246	295	151	60	45	42	41
21	44	49	1160	144	56	217	98	131	87	43	39	37
22	49	48	263	114	57	314	78	114	107	42	36	34
23	46	273	181	104	55	175	69	106	71	41	35	42
24	40	94	157	99	56	152	66	1090	63	40	34	40
25	36	80	200	637	66	128	63	295	56	42	34	37
26	37	426	143	2830	75	467	63	183	52	43	35	31
27	82	107	113	444	76	1230	60	153	67	85	33	30
28	46	85	103	238	69	314	57	138	51	158	696	29
29	37	86	95	188	---	209	60	127	56	56	120	28
30	34	156	92	164	---	169	63	117	67	49	55	31
31	31	---	93	151	---	149	---	108	---	103	92	---
TOTAL	1876	4628	6571	9048	2225	7217	2911	6081	2614	3195	2883	1328
MEAN	60.5	154	212	292	79.5	233	97.0	196	87.1	103	93.0	44.3
MAX	342	1190	1160	2830	135	1230	295	1090	193	706	696	100
MIN	28	32	61	68	55	45	57	49	51	40	33	28
CFSM	.95	2.41	3.31	4.56	1.24	3.64	1.52	3.06	1.36	1.61	1.45	.69
IN.	1.09	2.69	3.82	5.26	1.29	4.19	1.69	3.53	1.52	1.86	1.68	.77

CAL YR 1977 TOTAL 31516 MEAN 86.3 MAX 1190 MIN 13 CFSM 1.35 IN 18.32
WTR YR 1978 TOTAL 50577 MEAN 139 MAX 2830 MIN 28 CFSM 2.17 IN 29.40

01474000 WISSAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	HARD- NESS (MG/L AS CACO3)
OCT 05...	1400	9813	9813	35	600	8.0	15.0	6.5	--	196
NOV 17...	0930	9813	9813	72	500	--	--	--	--	168
DEC 15...	0945	9813	9813	277	330	--	--	--	--	88
JAN 16...	1400	9813	9813	88	500	--	--	--	--	132
FEB 21...	1100	9813	9813	54	500	--	--	--	--	156
MAR 20...	1030	9813	9813	19	--	--	--	--	--	82
MAY 23...	0900	9813	9813	109	490	--	--	--	--	145
JUN 15...	0930	9813	9813	66	400	--	--	--	--	146
JUL 20...	1430	9813	9813	46	500	--	--	--	11	161
AUG 23...	0930	9813	9813	36	600	8.3	21.0	4.4	14	172

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)
OCT 05...	0	--	46	--	20	160	55	32	.1
NOV 17...	--	39	--	19	--	120	60	63	.1
DEC 15...	--	21	--	9.3	--	60	35	41	.1
JAN 16...	--	35	--	12	--	90	40	74	.1
FEB 21...	--	39	--	15	--	124	56	74	.1
MAR 20...	--	20	--	8.2	--	62	26	36	.1
MAY 23...	--	32	--	17	--	100	50	44	<.1
JUN 15...	--	38	--	13	--	104	50	48	--
JUL 20...	--	42	--	15	--	112	50	66	--
AUG 23...	0	44	--	15	--	140	70	42	.2

01474000 WISAHICKON CREEK AT MOUTH, PHILADELPHIA, PA--Continued

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
OCT 05...	410	32	--	2.2	1.6	1.6	2.6	380	.07
NOV 17...	354	4	--	5.0	.29	2.7	1.5	420	.04
DEC 15...	242	64	306	1.6	.06	.54	.60	3392	--
JAN 16...	322	18	340	1.9	.09	1.6	.77	549	.14
FEB 21...	214	4	218	.41	.09	2.9	1.8	510	--
MAR 20...	278	20	298	--	--	.77	--	--	--
MAY 23...	232	22	254	3.3	.46	1.0	1.1	480	--
JUN 15...	286	18	304	1.8	.39	1.4	1.6	870	.05
JUL 20...	408	10	418	4.6	.48	.68	2.1	110	--
AUG 23...	446	18	--	5.3	.16	2.1	3.2	130	--

DATE	TIME	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
AUG 23...	0930	<3	10	20	<50	30	<10	10

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, Hydrologic Unit 02040203, on right bank 150 ft (46 m) upstream from Fairmount Dam, 1,500 ft (457 m) upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi (14.0 km) upstream from mouth. Water-quality sampling site 1.6 mi (2.6 km) upstream.

DRAINAGE AREA.--1,893 mi² (4,903 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year. Records for January 1898 to December 1912, published in WSP 35, 48, 65, 82, 97, 125, 166, 202, 241, 261, 281, 301, 381, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1302: 1936(M), WSP 1432: 1945. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5.74 ft (1.750 m) National Geodetic Vertical Datum of 1929. Prior to Nov.25, 1956, water-stage recorder at site on right bank just upstream from Fairmount Dam at same datum. Nov. 26, 1956 to Oct. 6, 1966, water-stage recorder at site on left bank 40 ft (12 m) upstream from Fairmount Dam at same datum.

REMARKS.--Records good. Some regulation by reservoirs above station. Records of daily discharge do not include diversion above station by city of Philadelphia for municipal water supply.

AVERAGE DISCHARGE.--47 years, 2,950 ft³/s (83.54 m³/s), 21.16 in/yr (537 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s (2,920 m³/s) June 23, 1972, gage height, 14.65 ft (4.465 m); no flow over dam at times; minimum daily, 0.6 ft³/s (0.02 m³/s) Sept. 2, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1896, reached a stage of 17.0 ft (5.18 m), discharge, 135,000 ft³/s (3,820 m³/s), from rating extended above 46,000 ft³/s (1,300 m³s). Flood of Mar. 1, 1902, reached a stage of 14.8 ft (4.511 m), discharge, 98,000 ft³/s (2,780 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18,000 ft³/s (510 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 8	0945	27,600	782	9.52	2.902	Jan. 26	1745	*64,000	1,810	*12.33	3.758
Dec. 1	1300	19,600	555	8.70	2.652	Mar. 14	2400	26,800	759	9.44	2.877
Dec. 18	2200	35,100	994	10.21	3.112	Mar. 27	1615	44,600	1,260	10.98	3.347
Dec. 21	1645	26,900	762	9.45	2.880	May 15	1245	18,900	535	8.62	2.627
Jan. 9	1600	28,300	801	9.59	2.923	May 18	0730	19,000	538	8.63	2.630

Minimum discharge, 517 ft³/s (14.6 m³/s) July 25, gage height, 5.87 (1.789 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	1300	13500	3920	6790	1690	8330	1730	3110	914	1850	2520
2	1150	1260	12500	3660	5950	1630	7020	1650	2760	914	1420	2110
3	1900	1250	8660	3340	4630	1640	5920	1570	2470	3260	1140	1310
4	1520	1530	6710	2890	3850	1520	5430	1570	3210	9530	1010	1070
5	1250	1850	5640	2770	3400	1370	5720	1850	2950	3690	1210	977
6	1100	1630	7630	2750	3350	1420	5020	1980	2290	2110	1460	852
7	1030	7410	6510	2700	3220	1410	4600	1890	2290	1530	3470	792
8	1000	21600	5020	2840	3540	1440	4390	1730	2380	1280	5190	706
9	1600	12500	4390	19200	3170	1440	3880	2950	2710	1170	6530	763
10	3540	8090	3920	18700	2860	1430	3470	4130	2760	1070	3910	763
11	3920	8560	3280	10400	2660	1540	3370	2520	2470	1170	3310	706
12	2720	8960	2890	7720	2600	2190	3470	2020	1980	1070	3630	734
13	2110	6670	2790	6240	2520	4070	3160	1850	2330	883	8580	914
14	1880	5240	3260	9280	2540	10800	2800	6440	2380	852	3210	852
15	3240	4280	9400	7020	2420	23800	2610	17400	1940	914	2110	763
16	4810	3700	7470	4960	2230	20000	2380	12700	1610	1730	1690	852
17	7460	3430	6030	4360	2160	11400	2290	14300	1530	1890	1420	852
18	8610	4870	14800	8830	2120	8480	2200	16300	1530	1460	1210	822
19	6240	3630	20700	6950	2090	7840	2560	11700	1420	1100	1040	822
20	5320	2870	12300	4930	1940	10600	5250	9110	1310	914	946	1100
21	4210	2510	19100	4400	1830	10200	4660	7210	1380	822	883	1210
22	3410	2440	17800	4180	1870	12200	3420	5890	2520	734	792	946
23	2900	4040	12600	3570	1770	10600	2850	4910	1980	651	734	883
24	2490	4220	9610	3200	1730	9700	2560	9480	1530	625	706	1010
25	2180	3260	8990	6080	1800	8690	2470	12700	1310	625	651	852
26	1970	9460	9180	46400	1870	10600	2290	7170	1170	678	678	734
27	2140	6410	6700	36400	1850	39000	2200	5400	1210	792	763	706
28	2060	4720	5730	14700	1680	28400	2110	4700	1210	1380	5310	678
29	1750	4100	4970	10700	---	17800	1940	4190	1100	852	3580	651
30	1530	4460	4550	8310	---	12800	1810	3810	977	734	2330	598
31	1400	---	4230	7530	---	10100	---	3420	---	977	1570	---
TOTAL	87560	156250	260860	278930	78440	285800	110180	184270	59817	46321	72333	28548
MEAN	2825	5208	8415	8998	2801	9219	3673	5944	1994	1494	2333	952
MAX	8610	21600	20700	46400	6790	39000	8330	17400	3210	9530	8580	2520
MIN	1000	1250	2790	2700	1680	1370	1810	1570	977	625	651	598
(≠)	266	261	275	283	287	280	261	271	292	304	299	259
MEAN≠	3091	5469	8690	9281	3088	9499	3934	6215	2286	1798	2632	1211
CFSM≠	1.63	2.89	4.59	4.90	1.63	5.02	2.08	3.28	1.21	.95	1.39	.64
IN.≠	1.88	3.22	5.29	5.65	1.70	5.79	2.32	3.79	1.35	1.10	1.60	.71

CAL YR 1977 TOTAL 1171246 MEAN 3209 MAX 27300 MIN 315 MEAN≠ 3500 CFSM≠ 1.85 IN.≠ 25.10
WTR YR 1978 TOTAL 1649309 MEAN 4519 MAX 46400 MIN 598 MEAN≠ 4797 CFSM≠ 2.53 IN.≠ 34.40

≠ Diversion, equivalent in cubic feet per second, for municipal water supply, furnished by City of Philadelphia.
≠ Adjusted for diversion.

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1945 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: January 1968 to current year.
WATER TEMPERATURES: October 1945 to current year.
DISSOLVED OXYGEN: January 1966 to current year.

REMARKS.--Water-quality recorder located at Belmont raw-water pumping station on west side of river near Columbia Bridge.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 972 micromhos Jun. 25, 1965; minimum, 126 micromhos Mar. 28, 1978.
pH: Maximum, 10.1 Aug. 12, 1969; minimum, 5.7 Dec. 21, 1973.
WATER TEMPERATURES: Maximum, 31.5°C Jul. 10, 1974, Aug. 22, 1978; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 18.3 mg/L Jan. 11, 1978; minimum, 0.4 mg/L July 24, 1971.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 533 micromhos Sept. 28; minimum, 126 micromhos Mar. 28.
pH: Maximum, 9.2 Aug. 22; minimum, 6.5 July 5.
WATER TEMPERATURES: Maximum, 31.5°C July 24; minimum, 1.5°C on many days during December, January and February.
DISSOLVED OXYGEN: Maximum, 18.3 mg/L Jan. 11; minimum, 1.9 mg/L July 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
28...	1130	2150	295	7.2	16.0	9.6	--	--	1200	1500	120	71
NOV												
15...	1430	4240	221	7.1	9.0	12.0	--	--	167	300	97	55
DEC												
21...	0830	14100	196	7.1	6.5	12.9	--	--	800	1400	88	44
JAN												
31...	1600	7570	226	7.1	2.0	14.1	--	--	1000	63	89	54
FEB												
28...	1015	1730	367	7.2	5.0	11.5	--	--	--	--	130	69
MAR												
13...	0800	3850	392	7.6	8.5	11.0	--	--	--	--	150	77
APR												
26...	0824	2290	298	7.8	15.5	7.8	--	15	--	--	130	83
MAY												
26...	0730	7640	220	7.2	17.5	10.0	--	--	1000	320	88	--
JUN												
05...	0700	3110	192	7.1	23.5	6.8	--	15	--	--	120	64
21...	1030	1210	380	7.3	25.5	6.6	--	--	1132	28	150	83
JUL												
12...	0700	1010	370	8.7	27.0	5.0	--	--	--	--	--	--
24...	1230	652	401	8.8	30.5	9.8	38	--	100	120	160	67
AUG												
10...	1300	3800	304	7.0	26.5	--	10	--	400	150	120	65
16...	0730	1650	300	7.8	--	5.8	--	24	--	--	120	60
SEP												
26...	0700	706	488	7.5	21.0	6.8	--	11	--	--	210	130

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT												
28...	31	11	16	22	.6	3.0	63	0	52	6.4	67	21
NOV												
15...	25	8.3	9.3	17	.4	2.4	51	0	42	6.5	43	12
DEC												
21...	21	6.7	10	21	.5	2.4	44	0	36	5.1	32	15
JAN												
31...	23	7.6	11	21	.5	2.2	42	0	34	5.3	40	17
FEB												
28...	33	12	19	23	.7	2.4	77	0	63	7.8	64	31
MAR												
13...	37	14	25	26	.9	4.4	89	0	73	3.6	78	38
APR												
26...	33	12	14	18	.5	2.4	60	0	49	1.5	61	22
MAY												
26...	23	7.4	10	19	.5	2.3	--	--	44	--	42	14
JUN												
05...	30	11	14	20	.6	2.2	68	0	56	8.6	56	19
21...	36	14	19	21	.7	3.2	--	--	65	--	72	26
JUL												
12...	--	--	--	--	--	--	--	--	--	--	--	--
24...	39	14	21	22	.7	4.0	--	--	88	--	67	28
AUG												
10...	31	11	11	16	.4	3.0	--	--	58	--	61	14
16...	30	10	13	19	.5	3.2	68	0	56	1.7	50	17
SEP												
26...	50	21	25	20	.7	3.9	100	0	0	5.1	120	33

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT											
28...	.1	8.5	177	189	--	--	2.4	.36	--	--	--
NOV											
15...	.0	9.3	148	134	--	--	2.7	--	--	--	--
DEC											
21...	.0	8.4	134	117	--	--	3.0	.21	--	--	--
JAN											
31...	.1	8.2	150	131	--	--	2.2	.23	.39	.62	--
FEB											
28...	.1	11	243	210	--	--	2.9	.82	.38	1.2	--
MAR											
13...	.1	9.2	282	242	--	--	2.7	.85	.75	1.6	.00
APR											
26...	--	--	214	--	2.1	.06	2.2	.38	.61	.99	--
MAY											
26...	.1	8.8	165	--	--	--	2.0	.14	--	--	--
JUN											
05...	--	--	220	--	--	--	2.5	--	--	--	--
21...	.1	8.2	272	218	--	--	3.2	.36	.94	1.3	.00
JUL											
12...	--	--	--	--	--	--	--	--	--	--	--
24...	.2	4.8	290	231	--	--	1.7	.27	1.2	1.5	.30
AUG											
10...	--	--	230	--	--	--	1.9	.13	.63	.76	.17
16...	--	--	220	--	3.0	.11	3.1	.08	.90	.98	--
SEP											
26...	.2	7.1	342	309	3.0	.05	3.0	.17	.93	1.1	.50

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
28...	.76	--	.23	.18	--	4.6	--	--	16	93	81
NOV											
15...	--	--	.15	--	--	7.1	--	750	29	332	83
DEC											
21...	1.1	--	.15	.06	--	13	--	--	--	--	--
JAN											
31...	--	2.8	.11	.10	--	--	28	--	--	--	--
FEB											
28...	--	4.1	.23	.15	--	2.8	--	--	--	--	--
MAR											
13...	2.5	5.2	.25	.31	--	6.4	--	380	--	--	--
APR											
26...	--	3.2	.18	--	.14	5.0	--	--	--	--	--
MAY											
26...	.53	--	.09	.08	--	8.7	--	1900	--	--	--
JUN											
05...	--	3.2	.16	--	.11	2.7	--	--	--	--	--
21...	1.3	4.5	.29	.26	--	4.9	--	32000	--	--	--
JUL											
12...	--	--	--	--	--	--	--	--	--	--	--
24...	1.2	3.2	.36	.35	--	--	7.7	110000	--	--	--
AUG											
10...	.59	2.7	.20	.13	--	3.8	--	21000	--	--	--
16...	--	4.1	.25	--	.18	5.2	--	--	--	--	--
SEP											
26...	.60	4.1	.39	.32	.33	5.4	--	6500	--	--	--

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
JAN 31...	1600	1	0	1	0	0	0	0	0	0	10
JUL 24...	1230	2	0	2	0	0	0	1	1	0	20
AUG 16...	0730	2	--	--	--	--	--	2	--	--	<10

DATE	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)
JAN 31...	2	8	6	3	3	9	1	8	1300	--
JUL 24...	17	3	2	2	0	8	1	7	130	110
AUG 16...	--	--	--	--	--	12	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
JAN 31...	370	12	8	4	250	40	210	<.5	.0	<.5
JUL 24...	20	13	10	3	160	150	10	<.5	.0	<.5
AUG 16...	--	28	--	--	--	--	--	<.5	--	.5

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
JAN 31...	--	0	0	0	0	0	0	90	10	80
JUL 24...	--	0	0	0	0	0	0	90	70	20
AUG 16...	40	--	--	--	--	--	--	40	--	--

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	NOV 15,77		MAR 13,78		MAY 26,78		JUN 21,78		JUL 24,78		AUG 10,78	
TIME	1430		0800		0730		1030		1230		0000	
TOTAL CELLS/ML	750		380		1900		32000		110000		21000	
DIVERSITY: DIVISION	1.3		1.0		1.6		1.4		1.1		1.2	
.CLASS	1.3		1.0		1.6		1.4		1.1		1.2	
..ORDER	1.5		1.3		2.2		2.0		1.4		1.4	
...FAMILY	2.5		2.7		3.2		2.7		2.5		1.6	
....GENUS	2.5		2.8		3.2		3.0		3.3		1.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	*	0	*	0
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	290	15	760	2	7600	7	190	1
...HYDRODICTYACEAE												
....PEDIASTRUM	99	13	--	-	--	-	--	-	4400	4	1700	8
...MICRACTINIACEAE												
....GOLENKINIA	--	-	--	-	--	-	--	-	970	1	--	-
....MICRACTINIUM	--	-	--	-	--	-	760	2	1200	1	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	14	4	--	-	570	2	3200	3	*	0
....CHODATELLA	--	-	--	-	--	-	1300	4	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	4400	4	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	1100	4	550	1	--	-
....OOCYSTIS	43	6	--	-	57	3	760	2	1700	2	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	830	1	--	-
....TETRAEDRON	--	-	--	-	--	-	190	1	*	0	--	-
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	11000	11	220	1
....SCENEDESMUS	--	-	--	-	57	3	9100#	29	36000#	34	1300	6
....TETRASTRUM	--	-	--	-	--	-	--	-	550	1	--	-
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	14	1	--	-	5200	5	610	3
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	130#	34	29	1	4300	14	--	-	--	-
....CHLOROGONIUM	--	-	--	-	--	-	--	-	*	0	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	37	5	7	2	160	8	6400#	20	1200	1	190	1
....MELOSIRA	--	-	*	0	--	-	--	-	*	0	550	3
....STEPHANODISCUS	--	-	--	-	--	-	--	-	9300	9	2000	9
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	190	1	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	190	1	--	-	--	-
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	29	1	--	-	--	-	--	-
...DIATOMACEAE												
....DIATOMA	12	2	7	2	29	1	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	28	8	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	14	4	--	-	--	-	--	-	--	-
....SYNEDRA	6	1	--	-	43	2	--	-	--	-	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	19	2	7	2	29	1	190	1	--	-	--	-
...MERIDIONACEAE												
....MERIDION	--	-	7	2	--	-	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	25	3	71#	19	340#	18	190	1	--	-	--	-
...NITZSCHIACEAE												
....NITZSCHIA	12	2	35	9	260	13	570	2	830	1	*	0
...SURIRELLACEAE												
....SURIRELLA	--	-	57#	15	14	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1977 TO AUGUST 1978

DATE	NOV 15,77		MAR 13,78		MAY 26,78		JUN 21,78		JUL 24,78		AUG 10,78	
TIME	1430		0800		0730		1030		1230		0800	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROCCOCCALES												
...CHROCCOCCAEAE												
....ANACYSTIS	--	-	--	-	100	5	5100#	16	14000	13	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-	*	0	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....CYLINDROSPERMUM	310#	42	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE												
....OSCILLATORIA	170#	23	--	-	470#	24	--	-	--	-	--	-
..CHROCCOCCALES												
...CHROCCOCCAEAE												
....GOMPHOSPHAERIA	--	-	--	-	--	-	--	-	2300	2	14000#	67
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	6	1	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	14	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	445	417	427	363	345	351	259	182	227	289	266	270
2	430	414	421	379	364	373	212	183	197	285	277	282
3	422	359	389	396	374	389	212	193	201	288	282	284
4	359	351	355	407	389	398	225	194	206	303	288	297
5	374	358	366	424	407	415	230	208	214	313	300	307
6	374	355	364	426	411	417	240	220	230	309	301	305
7	362	355	357	---	---	---	226	220	223	307	300	303
8	357	347	350	---	---	---	236	223	229	316	302	308
9	349	333	342	---	---	---	255	231	244	306	170	239
10	356	335	348	---	---	---	274	254	266	214	173	192
11	360	317	340	---	---	---	286	270	276	188	174	180
12	325	290	306	---	---	---	303	282	292	205	188	197
13	300	290	296	---	---	---	295	281	290	291	205	245
14	297	277	290	204	196	199	316	290	300	311	262	281
15	284	270	277	227	204	216	319	240	287	270	256	264
16	301	275	284	270	227	248	246	233	239	279	263	269
17	288	217	252	280	270	274	249	230	240	407	267	311
18	245	212	227	293	277	286	254	155	228	449	299	344
19	217	205	211	292	275	284	177	149	159	321	275	292
20	214	205	208	297	285	291	205	178	191	319	296	305
21	232	212	224	311	273	304	206	158	188	302	290	295
22	247	232	238	316	272	293	189	157	176	295	288	291
23	263	242	252	316	303	309	198	187	193	305	289	294
24	272	257	265	307	293	301	209	197	202	309	294	303
25	289	254	269	293	285	288	218	208	211	403	304	355
26	263	257	260	298	218	265	222	217	219	391	128	204
27	278	262	266	234	219	228	233	223	227	183	129	161
28	308	276	294	276	234	261	242	232	239	188	163	174
29	341	308	324	277	266	272	250	241	245	199	185	191
30	343	325	334	272	255	262	259	250	254	214	197	205
31	354	321	339	---	---	---	265	256	260	226	205	217
MONTH	445	205	306	426	196	301	319	149	231	449	128	263

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	229	214	220	380	369	373	213	191	204	304	297	300
2	251	230	241	380	369	374	216	200	209	336	298	316
3	275	251	264	392	370	379	225	212	219	339	328	333
4	283	275	280	395	382	389	235	222	229	341	325	334
5	296	284	290	404	387	395	238	230	234	346	327	337
6	307	296	302	404	391	398	242	233	237	353	339	346
7	309	295	302	401	396	398	251	239	245	355	342	348
8	313	305	309	405	388	394	255	248	250	351	323	334
9	310	292	301	412	405	408	261	252	256	324	306	315
10	324	299	319	409	392	399	264	258	260	310	268	291
11	320	311	316	401	392	397	265	258	261	279	263	269
12	327	307	315	405	394	401	275	263	267	300	275	285
13	332	320	326	403	374	389	275	268	271	305	295	299
14	344	327	335	371	244	320	280	268	275	301	248	290
15	342	324	331	235	167	185	289	276	283	242	222	---
16	364	332	340	188	172	181	296	283	289	---	---	---
17	353	342	345	190	165	174	302	286	293	---	---	---
18	368	352	360	207	192	201	302	293	298	190	156	179
19	361	354	358	223	207	215	320	294	300	202	187	194
20	361	350	355	223	188	201	323	293	310	209	199	203
21	356	350	352	199	182	192	292	266	277	219	209	215
22	364	355	361	194	178	183	274	263	269	222	217	220
23	365	357	361	195	180	188	283	272	278	233	219	226
24	371	360	366	198	189	194	287	271	278	239	221	231
25	374	365	369	205	189	194	301	274	283	238	184	196
26	380	369	374	204	195	199	312	292	300	227	219	222
27	390	375	379	194	127	145	308	280	291	242	227	235
28	377	365	370	136	126	132	297	287	292	248	238	243
29	---	---	---	154	136	145	301	290	294	246	241	243
30	---	---	---	173	150	162	308	290	297	251	244	246
31	---	---	---	193	175	185	---	---	---	276	247	255
MONTH	390	214	326	412	126	274	323	191	268	355	156	268

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	289	255	278	381	362	372	441	408	429	337	309	324
2	304	287	296	393	369	383	429	394	410	352	332	345
3	290	246	260	407	294	374	413	395	404	344	320	326
4	241	194	206	327	217	256	403	387	395	337	329	334
5	216	176	191	246	214	224	401	351	375	351	336	344
6	192	172	180	254	225	239	409	357	393	365	343	356
7	300	159	179	320	262	298	416	386	406	382	364	374
8	193	167	181	333	320	326	422	240	366	395	380	387
9	196	186	191	336	320	325	380	232	315	396	386	391
10	210	188	200	360	336	352	308	264	287	399	390	394
11	209	198	205	370	355	364	303	268	276	412	391	404
12	210	193	201	370	359	366	281	264	270	416	398	407
13	211	185	194	372	364	368	264	172	214	456	404	427
14	204	156	178	407	369	381	199	174	184	520	456	473
15	---	---	---	444	394	416	298	201	254	519	492	507
16	---	---	---	431	398	412	342	268	323	521	509	516
17	---	---	---	418	392	405	358	343	353	520	512	516
18	---	---	---	414	398	403	369	350	357	526	508	518
19	---	---	---	406	365	383	374	350	363	521	505	513
20	374	363	368	391	369	378	373	359	367	523	506	514
21	390	362	380	381	358	371	378	360	367	518	501	506
22	400	365	383	386	373	380	385	372	378	505	476	495
23	371	332	352	408	372	394	385	364	377	494	438	465
24	374	339	353	414	378	396	380	359	367	507	439	486
25	378	369	372	400	391	395	375	359	366	497	435	467
26	387	372	379	416	400	409	375	356	364	527	426	471
27	401	374	392	434	386	424	375	359	367	531	421	482
28	399	386	393	426	358	397	378	292	332	533	433	489
29	393	381	387	417	388	401	326	282	301	464	399	432
30	390	370	379	393	365	376	304	266	281	503	390	432
31	---	---	---	406	365	378	308	289	299	---	---	---
MONTH	401	156	283	444	214	366	441	172	340	533	309	436

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.2	7.1	7.1	7.3	7.2	7.3	7.3	7.0	7.2	7.4	7.3	7.3
2	7.2	7.1	7.1	7.2	7.2	7.2	7.1	7.0	7.1	7.4	7.3	7.4
3	7.5	7.2	7.4	7.2	7.1	7.2	7.1	7.1	7.1	7.4	7.4	7.4
4	7.5	7.4	7.5	7.1	7.0	7.1	7.2	7.1	7.2	7.5	7.4	7.4
5	7.5	7.4	7.4	7.1	6.9	7.0	7.2	7.2	7.2	7.4	7.4	7.4
6	7.4	7.4	7.4	7.1	6.9	7.0	7.3	7.2	7.2	7.4	7.4	7.4
7	7.4	7.3	7.4	7.4	7.2	7.3	7.3	7.2	7.2	7.4	7.4	7.4
8	7.5	7.3	7.4	7.2	7.0	7.1	7.3	7.2	7.3	7.4	7.4	7.4
9	7.4	7.3	7.4	---	---	---	7.3	7.3	7.3	7.4	7.0	7.3
10	7.4	7.3	7.4	---	---	---	7.4	7.3	7.3	7.2	7.0	7.1
11	7.5	7.4	7.4	---	---	---	7.4	7.3	7.4	7.1	7.1	7.1
12	7.4	7.3	7.4	---	---	---	7.4	7.3	7.4	7.2	7.1	7.1
13	7.4	7.3	7.4	---	---	---	7.4	7.3	7.3	7.2	7.1	7.2
14	7.4	7.4	7.4	7.2	7.1	7.1	7.3	7.3	7.3	7.3	7.2	7.2
15	7.4	7.3	7.4	7.2	7.1	7.1	7.4	7.2	7.3	7.2	7.2	7.2
16	7.4	7.2	7.4	7.2	7.1	7.1	7.2	7.2	7.2	7.2	7.2	7.2
17	7.4	7.2	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.3	7.2	7.3
18	7.3	7.2	7.2	7.3	7.1	7.2	7.3	6.9	7.2	7.3	7.2	7.3
19	7.2	7.1	7.2	7.2	7.2	7.2	7.1	6.9	7.0	7.2	7.2	7.2
20	7.2	7.1	7.2	7.3	7.2	7.2	7.2	7.1	7.1	7.3	7.2	7.3
21	7.2	7.2	7.2	7.3	7.2	7.2	7.2	7.0	7.1	7.3	7.2	7.3
22	7.2	7.2	7.2	7.3	7.2	7.2	7.1	7.0	7.1	7.3	7.3	7.3
23	7.2	7.2	7.2	7.3	7.3	7.3	7.1	7.0	7.1	7.3	7.3	7.3
24	7.2	7.1	7.2	7.3	7.3	7.3	7.1	7.1	7.1	7.4	7.3	7.3
25	7.3	7.2	7.2	7.3	7.3	7.3	7.2	7.1	7.2	7.4	7.3	7.3
26	7.3	7.2	7.2	7.3	7.1	7.2	7.3	7.2	7.2	7.3	6.8	7.0
27	7.3	7.2	7.2	7.2	7.1	7.2	7.4	7.2	7.3	6.9	6.8	6.9
28	7.3	7.1	7.2	7.3	7.2	7.3	7.3	7.2	7.3	7.0	6.9	6.9
29	7.3	7.2	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.0	7.0	7.0
30	7.3	7.2	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.0	7.0	7.0
31	7.3	7.2	7.3	---	---	---	7.3	7.3	7.3	7.2	7.0	7.1
MONTH	7.5	7.1	7.3	7.4	6.9	7.2	7.4	6.9	7.2	7.5	6.8	7.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.3	7.2	7.2	7.5	7.5	7.5	7.2	7.1	7.2	8.5	7.7	8.2
2	7.3	7.3	7.3	7.6	7.5	7.5	7.3	7.2	7.3	8.6	7.8	8.2
3	7.4	7.3	7.3	7.6	7.5	7.5	7.3	7.3	7.3	8.7	7.8	8.3
4	7.4	7.4	7.4	7.6	7.5	7.5	7.4	7.3	7.3	8.5	7.9	8.2
5	7.4	7.3	7.3	7.6	7.5	7.6	7.4	7.3	7.4	8.1	7.6	7.8
6	7.4	7.3	7.4	7.6	7.5	7.6	7.4	7.3	7.4	7.6	7.5	7.6
7	7.5	7.4	7.4	7.6	7.5	7.6	7.4	7.3	7.4	7.7	7.5	7.6
8	7.5	7.4	7.4	7.6	7.5	7.6	7.5	7.4	7.4	7.7	7.5	7.6
9	7.4	7.3	7.4	7.6	7.5	7.6	7.5	7.4	7.4	7.6	7.4	7.5
10	7.4	7.4	7.4	7.6	7.5	7.6	7.5	7.4	7.5	7.5	7.4	7.4
11	7.4	7.4	7.4	7.6	7.5	7.5	7.6	7.4	7.5	7.5	7.3	7.4
12	7.4	7.4	7.4	7.6	7.5	7.6	7.6	7.5	7.5	7.8	7.4	7.5
13	7.4	7.4	7.4	7.6	7.5	7.6	7.7	7.5	7.6	7.6	7.4	7.5
14	7.4	7.4	7.4	7.5	7.3	7.4	7.8	7.5	7.7	7.4	7.2	7.4
15	7.4	7.4	7.4	7.3	7.0	7.1	7.9	7.6	7.7	7.2	7.1	---
16	7.4	7.4	7.4	7.1	7.0	7.0	7.8	7.6	7.7	---	---	---
17	7.4	7.4	7.4	7.1	7.0	7.0	7.8	7.6	7.7	---	---	---
18	7.4	7.4	7.4	7.1	7.1	7.1	7.9	7.6	7.7	7.2	7.2	7.2
19	7.5	7.4	7.4	7.2	7.1	7.1	7.7	7.5	7.6	7.2	7.2	7.2
20	7.5	7.4	7.4	7.2	7.1	7.1	7.6	7.4	7.5	7.2	7.2	7.2
21	7.4	7.4	7.4	7.2	7.1	7.1	7.5	7.3	7.4	7.3	7.2	7.2
22	7.5	7.4	7.5	7.2	7.1	7.1	7.5	7.3	7.4	7.3	7.2	7.3
23	7.5	7.5	7.5	7.2	7.1	7.1	7.6	7.4	7.5	7.4	7.3	7.3
24	7.5	7.5	7.5	7.2	7.1	7.1	7.8	7.5	7.6	7.3	7.2	7.2
25	7.5	7.5	7.5	7.3	7.1	7.2	8.0	7.4	7.7	7.2	7.0	7.1
26	7.5	7.4	7.5	7.3	7.2	7.2	8.1	7.8	7.9	7.3	7.2	7.2
27	7.5	7.5	7.5	7.2	6.9	7.0	8.0	7.9	7.9	7.3	7.2	7.3
28	7.6	7.2	7.5	6.9	6.8	6.9	8.2	7.7	8.0	7.4	7.3	7.3
29	---	---	---	7.0	6.9	6.9	8.3	7.8	8.1	7.4	7.3	7.3
30	---	---	---	7.1	7.0	7.0	8.3	7.8	8.1	7.5	7.3	7.4
31	---	---	---	7.2	7.1	7.1	---	---	---	7.5	7.4	7.4
MONTH	7.6	7.2	7.4	7.6	6.8	7.3	8.3	7.1	7.6	8.7	7.0	7.5

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.2	7.6	8.8	8.2	8.5	8.0	7.7	7.9	7.2	7.1	7.1
2	8.3	7.3	7.7	8.4	7.8	8.1	8.2	7.7	7.9	7.3	7.1	7.2
3	7.6	7.2	7.4	7.7	7.1	7.4	7.6	7.2	7.4	7.3	7.1	7.2
4	7.5	7.2	7.3	7.1	6.6	6.7	7.6	7.2	7.4	7.4	7.1	7.2
5	7.2	7.1	7.2	6.8	6.5	6.6	7.4	7.2	7.3	8.1	7.2	7.5
6	7.3	7.1	7.2	7.6	6.7	7.1	7.6	7.1	7.3	8.3	7.4	7.8
7	7.3	7.0	7.1	8.7	7.2	8.0	7.6	7.1	7.3	8.3	7.5	7.8
8	7.2	7.0	7.1	8.9	7.9	8.6	7.3	6.9	7.1	7.6	7.3	7.3
9	7.2	7.1	7.1	8.8	8.3	8.6	7.0	6.9	6.9	7.5	7.2	7.3
10	7.4	7.1	7.3	8.7	8.0	8.4	7.1	6.8	7.0	7.5	7.3	7.4
11	7.9	7.2	7.4	8.9	8.5	8.7	7.3	7.0	7.1	7.5	7.3	7.4
12	8.3	7.2	7.7	9.1	8.6	8.9	7.2	7.0	7.1	7.7	7.3	7.5
13	7.9	7.1	7.2	9.1	8.9	9.0	6.9	6.6	6.8	7.5	7.1	7.3
14	7.4	6.9	7.2	8.9	8.3	8.7	6.7	6.6	6.6	8.3	7.8	8.0
15	7.8	7.2	7.4	---	---	---	6.9	6.5	6.7	7.8	7.4	7.6
16	7.8	7.2	7.5	---	---	---	7.9	7.5	7.8	7.7	7.4	7.5
17	7.4	7.1	7.2	---	---	---	8.7	7.3	7.9	7.7	7.4	7.5
18	7.6	7.1	7.3	---	---	---	8.8	7.5	8.2	7.9	7.5	7.6
19	8.1	7.1	7.4	---	---	---	8.9	8.1	8.5	7.6	7.4	7.5
20	8.4	7.2	7.7	---	---	---	8.7	8.1	8.4	7.6	7.4	7.4
21	8.1	7.3	7.6	---	---	---	9.0	8.2	8.6	7.5	7.3	7.4
22	7.6	7.1	7.3	---	---	---	9.2	8.5	8.8	7.4	7.3	7.4
23	7.8	7.1	7.4	---	---	---	9.1	8.5	8.8	7.5	7.3	7.4
24	7.9	7.2	7.5	9.1	8.8	9.0	9.1	8.3	8.6	7.6	7.4	7.5
25	8.7	7.4	8.0	9.1	8.6	8.8	9.0	8.1	8.4	7.9	7.3	7.5
26	8.5	8.1	8.3	9.1	8.6	8.9	8.3	7.7	8.0	7.9	7.5	7.6
27	8.6	8.1	8.4	8.9	8.5	8.7	7.9	7.5	7.7	8.3	7.5	7.8
28	8.6	8.2	8.4	---	---	---	7.5	7.0	7.2	7.9	7.5	7.7
29	8.6	8.2	8.4	---	---	---	7.3	7.0	7.1	8.3	7.5	7.8
30	8.6	8.1	8.3	---	---	---	7.2	7.0	7.1	8.4	7.5	8.0
31	---	---	---	---	---	---	7.4	7.1	7.2	---	---	---
MONTH	8.7	6.9	7.6	9.1	6.5	8.3	9.2	6.5	7.6	8.4	7.1	7.5

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	20.0	20.5	14.5	14.0	14.5	7.0	6.5	7.0	4.0	3.5	4.0
2	21.0	20.0	20.5	15.0	14.5	15.0	7.5	7.0	7.0	4.0	3.5	4.0
3	20.0	19.0	19.5	16.0	15.0	15.5	7.5	7.0	7.5	4.0	3.0	3.5
4	19.0	18.0	18.5	17.0	16.0	16.5	7.5	7.0	7.0	3.5	3.0	3.0
5	18.5	17.5	18.0	19.0	17.0	18.0	7.0	7.0	7.0	3.5	3.0	3.0
6	18.0	17.5	17.5	18.5	18.0	18.0	7.0	6.0	6.5	4.5	3.5	4.0
7	18.0	17.0	17.5	16.5	15.5	16.0	6.0	4.5	5.5	5.0	4.5	4.5
8	17.0	16.5	16.5	15.5	14.5	14.5	4.5	4.0	4.0	7.0	5.0	5.5
9	17.0	16.5	16.5	---	---	---	4.0	3.5	4.0	8.5	5.5	7.0
10	16.5	16.0	16.0	---	---	---	3.5	2.0	3.0	5.5	3.0	4.0
11	16.0	15.0	15.5	---	---	---	2.5	1.5	2.0	3.0	2.0	2.0
12	16.0	15.0	15.5	---	---	---	1.5	1.5	1.5	2.5	1.5	2.0
13	15.5	15.0	15.0	---	---	---	2.5	1.5	2.0	3.0	2.5	2.5
14	15.0	14.0	14.5	9.0	8.0	8.5	4.5	2.5	3.5	3.5	2.5	3.0
15	14.5	13.5	14.0	9.0	8.0	8.5	5.0	4.5	4.5	3.0	2.5	2.5
16	14.5	13.5	14.0	9.5	9.0	9.0	5.5	4.5	5.0	3.0	2.0	2.5
17	13.0	12.0	12.5	11.0	9.5	10.5	5.0	4.5	5.0	2.5	2.5	2.5
18	12.5	11.5	12.0	11.5	10.5	11.0	5.0	4.0	5.0	3.5	2.5	3.0
19	12.5	12.0	12.0	10.5	10.0	10.0	5.0	4.0	4.5	3.0	2.5	2.5
20	12.5	11.5	12.0	10.0	9.5	9.5	6.0	5.0	5.5	2.5	1.5	2.0
21	13.5	12.0	12.5	10.0	9.5	9.5	6.5	6.0	6.5	2.5	1.5	2.0
22	14.0	13.0	13.5	10.0	9.0	9.5	6.5	6.0	6.0	2.5	1.5	2.0
23	14.5	13.5	14.0	9.5	9.0	9.5	5.5	5.5	5.5	3.0	2.0	2.5
24	14.5	13.5	14.0	10.0	9.0	9.5	6.0	5.5	5.5	3.0	2.0	2.5
25	14.5	13.5	14.0	9.5	9.0	9.0	6.5	6.0	6.5	3.5	2.5	3.0
26	14.0	13.5	14.0	9.5	7.5	8.5	6.5	4.5	5.5	3.0	2.0	2.5
27	15.5	14.0	15.0	7.5	6.5	7.0	4.5	3.5	4.0	3.0	2.5	3.0
28	16.5	15.5	16.0	6.5	6.0	6.5	3.5	2.5	3.0	3.0	2.5	2.5
29	16.5	15.5	16.0	6.5	6.0	6.0	2.5	2.0	2.5	3.0	2.5	2.5
30	16.5	15.0	15.5	6.5	6.0	6.0	3.0	2.0	2.5	---	---	---
31	15.5	14.5	15.0	---	---	---	4.0	3.0	3.5	2.5	2.0	2.0
MONTH	21.0	11.5	15.5	19.0	6.0	11.0	7.5	1.5	5.0	8.5	1.5	3.0

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	2.0	2.0	6.0	5.0	5.5	12.5	10.5	11.5	18.0	15.5	17.0
2	2.5	2.0	2.5	6.5	4.5	5.5	12.5	11.5	12.0	18.0	15.5	17.0
3	3.5	2.5	2.5	5.5	4.5	4.5	12.0	10.5	11.5	19.0	16.0	17.5
4	3.5	2.5	2.5	5.5	4.0	5.0	11.5	10.5	11.0	18.0	16.5	17.0
5	3.0	2.0	2.5	5.0	3.5	4.5	12.5	11.0	11.5	16.5	15.5	16.0
6	2.5	1.5	2.0	5.0	3.5	4.5	12.5	11.5	12.0	15.5	14.5	15.0
7	1.5	1.5	1.5	5.5	4.0	4.5	13.0	12.0	12.5	16.0	14.0	15.0
8	1.5	1.5	1.5	5.0	4.0	4.5	14.0	12.0	13.0	15.0	14.5	15.0
9	1.5	1.5	1.5	5.5	5.0	5.0	14.0	12.5	13.0	16.5	15.0	15.5
10	3.0	1.5	2.5	5.5	5.5	5.5	14.5	12.5	13.5	17.5	16.0	17.0
11	3.5	2.5	3.0	7.5	5.5	6.5	14.5	13.5	14.0	18.5	16.5	17.0
12	4.0	2.5	3.0	8.5	7.0	7.5	16.0	14.0	15.0	20.0	17.5	18.5
13	4.0	3.0	3.5	9.5	8.0	8.5	16.5	14.5	15.5	19.0	18.5	18.5
14	3.5	3.0	3.5	8.5	6.5	7.5	16.5	15.0	15.5	19.0	18.0	18.5
15	4.5	3.0	3.5	6.5	4.5	5.0	16.0	14.5	15.0	17.5	16.5	---
16	4.5	3.0	3.5	5.5	4.5	5.0	15.0	13.5	14.5	---	---	---
17	4.5	4.0	4.5	5.0	4.0	4.5	15.0	13.5	14.0	---	---	---
18	5.0	4.5	4.5	6.5	5.0	5.5	15.5	13.5	14.0	14.5	14.0	14.0
19	5.5	4.0	4.5	8.0	6.0	7.0	13.5	13.5	13.5	15.5	14.0	15.0
20	5.5	4.0	4.5	8.0	7.0	7.5	14.0	13.0	13.5	18.0	15.5	17.0
21	5.5	4.0	4.5	9.0	7.5	8.0	13.5	12.5	13.0	20.5	18.0	19.0
22	5.0	3.5	4.5	9.5	8.5	9.0	14.0	12.5	13.0	21.0	19.5	20.0
23	5.0	3.0	4.0	10.0	9.0	9.5	15.0	12.5	14.0	21.0	20.0	20.5
24	5.0	3.0	4.0	11.0	10.0	10.5	16.0	14.5	15.5	20.0	18.0	19.0
25	6.0	4.0	5.0	10.0	9.0	9.5	17.0	15.0	16.0	18.0	16.5	17.0
26	6.5	4.5	5.5	9.0	7.5	8.5	16.0	15.5	15.5	19.5	17.5	19.0
27	7.0	5.0	6.0	7.5	6.5	6.5	15.5	14.5	15.0	20.5	19.5	20.0
28	6.5	5.0	5.5	8.5	7.0	8.0	16.0	14.0	15.0	21.5	20.0	21.0
29	---	---	---	10.0	8.5	9.0	17.0	14.0	15.5	22.5	21.0	21.5
30	---	---	---	10.5	9.5	10.0	18.0	15.5	16.5	23.5	21.5	22.5
31	---	---	---	11.0	10.0	10.5	---	---	---	24.0	22.5	23.5
MONTH	7.0	1.5	3.5	11.0	3.5	7.0	18.0	10.5	14.0	24.0	14.0	18.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	24.0	25.0	28.0	26.5	27.0	26.0	25.0	25.5	26.5	25.5	26.0
2	27.0	25.0	26.0	27.0	26.0	26.5	25.5	25.0	25.0	26.5	25.0	25.5
3	26.5	25.5	26.0	26.0	23.0	25.0	26.0	25.0	25.5	26.0	24.5	25.0
4	26.0	24.0	25.0	23.5	19.5	21.0	26.5	25.5	26.0	26.0	24.5	25.0
5	24.0	23.0	24.0	21.0	19.5	20.0	26.5	25.5	26.0	26.0	24.5	25.0
6	24.0	22.0	23.0	23.0	20.5	21.5	27.5	25.5	26.5	26.5	24.5	25.5
7	23.5	22.5	23.0	25.0	22.0	23.5	28.5	26.5	27.5	27.0	25.0	26.0
8	24.0	23.0	23.5	26.0	23.5	25.0	28.0	27.0	27.5	26.0	24.0	24.5
9	25.0	23.5	24.0	28.0	25.5	26.5	27.0	26.5	26.5	24.5	23.5	24.0
10	25.0	23.5	24.5	28.0	27.5	28.0	26.5	26.0	26.5	23.5	22.5	23.0
11	25.5	24.0	24.5	28.5	27.0	27.5	27.0	25.5	26.5	24.0	22.5	23.0
12	26.0	24.0	25.0	28.0	26.5	27.5	26.5	25.5	26.5	25.0	23.5	24.0
13	25.0	23.5	24.5	27.5	26.5	27.0	26.0	25.0	25.5	24.5	23.0	24.0
14	23.5	22.0	23.0	26.5	26.0	26.5	26.5	25.0	25.5	24.0	22.5	23.0
15	23.0	21.5	22.5	26.5	25.0	25.5	26.5	25.5	26.0	23.0	22.5	22.5
16	23.5	21.5	22.5	26.0	25.5	26.0	29.0	28.5	29.0	24.0	22.5	23.5
17	22.5	21.5	22.5	26.5	25.5	26.0	30.0	28.0	29.0	24.5	23.0	23.5
18	24.0	21.5	23.0	27.0	25.5	26.0	30.0	28.0	29.0	25.0	23.5	24.0
19	25.0	23.0	24.0	27.5	26.0	26.5	30.0	28.5	29.5	24.5	23.0	24.0
20	26.5	24.5	25.5	28.0	26.5	27.0	30.0	28.5	29.5	25.0	23.0	24.0
21	26.5	25.5	26.0	29.0	27.0	28.0	29.5	28.0	28.5	25.0	23.0	24.0
22	27.5	25.5	26.5	30.0	28.0	29.0	29.5	27.5	28.5	25.0	23.5	24.5
23	27.5	25.5	26.5	30.5	29.0	30.0	29.5	27.0	28.5	24.5	23.0	23.5
24	27.5	25.5	26.5	31.5	29.5	30.5	29.0	27.5	28.0	24.0	22.5	23.0
25	27.5	25.5	26.5	30.5	29.0	29.5	28.5	26.5	27.5	24.0	22.5	23.0
26	26.5	26.0	26.0	29.0	27.5	28.5	27.5	26.0	26.5	23.0	21.0	22.0
27	28.0	26.0	26.5	29.0	27.5	28.0	27.0	26.0	26.5	23.0	21.0	22.0
28	28.0	27.0	27.5	28.5	26.5	27.5	26.0	25.0	25.5	22.0	20.5	21.5
29	28.5	27.0	27.5	28.0	27.0	27.5	26.5	25.5	26.0	21.5	19.5	20.5
30	28.5	27.0	27.5	28.5	27.0	27.5	27.0	26.0	26.5	21.0	19.0	20.0
31	---	---	---	27.0	25.5	26.5	27.0	26.0	26.5	---	---	---
MONTH	28.5	21.5	25.0	31.5	19.5	26.5	30.0	25.0	27.0	27.0	19.0	23.5

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.7	8.8	9.3	12.8	12.1	12.5	13.5	13.3	13.4
2	---	---	---	---	---	---	12.4	12.2	12.3	13.4	13.2	13.3
3	8.8	8.0	8.6	---	---	---	12.5	12.2	12.4	13.5	13.2	13.4
4	8.7	8.0	8.3	---	---	---	12.6	12.5	12.5	13.7	13.3	13.6
5	8.7	8.1	8.4	---	---	---	12.5	12.1	12.4	13.6	13.4	13.5
6	8.3	7.9	8.1	---	---	---	12.5	12.0	12.3	13.5	13.2	13.3
7	8.5	7.8	8.2	9.6	9.4	9.5	13.2	12.5	12.8	13.2	12.1	12.8
8	8.7	8.2	8.4	9.5	8.6	9.1	13.8	13.3	13.6	12.7	12.2	12.6
9	8.3	8.1	8.2	---	---	---	13.6	13.3	13.4	12.5	11.6	12.0
10	9.0	8.1	8.5	---	---	---	14.1	13.4	13.8	14.8	12.5	13.8
11	9.3	8.8	9.1	---	---	---	14.2	14.1	14.2	18.3	13.8	14.3
12	9.3	8.7	9.0	---	---	---	14.3	14.1	14.2	14.5	14.2	14.3
13	8.8	7.6	8.3	---	---	---	14.1	13.8	13.9	14.2	13.7	14.0
14	8.9	7.7	8.5	12.8	12.3	12.5	13.8	13.1	13.5	13.7	13.5	13.6
15	8.5	8.5	---	12.2	11.6	12.0	13.4	12.6	13.1	13.8	13.5	13.7
16	---	---	---	12.5	11.3	11.6	13.3	13.1	13.2	13.9	13.7	13.8
17	10.3	9.9	10.1	11.6	10.4	11.0	13.2	13.0	13.2	13.9	13.7	13.8
18	10.3	10.2	10.2	11.5	11.2	11.3	13.0	12.6	12.9	13.8	13.5	13.6
19	10.3	10.1	10.2	11.6	11.4	11.5	13.4	12.4	13.0	13.9	13.6	13.8
20	10.3	10.0	10.2	11.8	11.6	11.7	13.3	13.1	13.2	13.7	13.5	13.6
21	10.1	9.7	9.9	11.8	11.6	11.7	13.1	12.8	12.9	13.9	13.7	13.8
22	---	---	---	11.6	11.4	11.5	13.3	12.8	13.1	14.1	13.9	13.9
23	---	---	---	11.5	10.9	11.1	13.5	13.3	13.4	13.9	13.7	13.8
24	---	---	---	11.3	10.9	11.1	13.4	13.2	13.3	13.8	13.6	13.7
25	11.4	10.7	10.9	11.3	11.1	11.3	13.2	12.9	13.0	13.7	13.2	13.5
26	10.7	10.2	10.5	11.6	11.0	11.3	13.4	12.8	13.1	13.5	12.2	13.0
27	10.2	9.8	10.0	12.2	11.6	12.0	13.8	13.4	13.7	13.6	12.0	12.5
28	9.8	9.4	9.6	12.4	12.2	12.3	14.0	13.8	13.9	13.3	12.6	13.0
29	9.7	9.2	9.4	12.8	12.2	12.7	14.2	14.0	14.1	13.3	12.5	13.1
30	9.4	8.8	9.1	12.9	12.7	12.8	14.1	13.9	14.0	---	---	---
31	9.6	9.0	9.2	---	---	---	13.9	13.5	13.7	14.1	13.9	14.0
MONTH	11.4	7.6	9.2	12.9	8.6	11.4	14.3	12.0	13.3	18.3	11.6	13.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.3	13.9	14.0	11.8	11.5	11.6	11.0	10.5	10.8	10.7	8.4	9.8
2	14.1	13.6	13.8	12.0	11.5	11.7	10.9	10.4	10.7	10.6	8.7	9.9
3	13.7	13.6	13.6	11.9	11.6	11.7	11.2	10.8	11.0	11.3	8.6	10.1
4	13.7	13.5	13.6	12.1	11.5	11.8	11.2	11.0	11.1	10.3	8.7	9.5
5	13.6	13.5	13.6	12.4	11.8	12.1	11.1	10.8	10.9	9.1	8.1	8.7
6	13.6	13.4	13.5	12.9	12.0	12.4	10.8	10.7	10.8	9.5	8.5	8.9
7	13.7	13.4	13.6	13.4	12.3	12.6	10.8	10.5	10.6	10.5	9.1	9.8
8	13.9	13.7	13.8	12.6	11.9	12.2	10.7	10.4	10.5	10.3	9.4	9.9
9	14.3	13.1	13.7	12.5	11.7	12.0	10.8	10.4	10.6	9.6	8.3	8.8
10	13.1	12.5	12.7	12.1	11.7	11.9	10.8	10.3	10.5	8.6	7.7	8.2
11	12.6	12.2	12.3	12.1	11.5	11.8	10.5	10.0	10.2	9.3	8.2	8.7
12	12.2	12.0	12.2	11.7	11.2	11.5	10.4	9.8	10.1	9.6	7.9	8.7
13	12.2	12.0	12.1	11.6	11.0	11.3	10.4	9.6	10.0	8.9	7.6	8.2
14	12.0	11.9	12.0	11.7	11.0	11.2	10.7	9.5	10.1	8.3	7.5	7.9
15	12.2	11.9	12.1	12.2	11.5	12.0	11.0	9.7	10.3	8.4	8.3	---
16	12.1	12.0	12.0	11.9	11.4	11.6	11.2	9.9	10.6	---	---	---
17	12.1	11.9	12.0	12.4	11.8	12.0	10.9	10.0	10.5	---	---	---
18	12.0	11.7	11.8	11.8	11.2	11.7	11.2	9.9	10.6	11.0	10.1	10.3
19	12.0	11.7	11.8	11.3	10.3	10.8	10.6	9.3	9.9	10.2	9.8	10.0
20	11.9	11.7	11.8	11.5	11.2	11.4	10.1	8.4	9.6	9.7	9.1	9.5
21	11.9	11.8	11.9	11.5	11.1	11.3	10.6	9.9	10.2	9.1	8.8	9.0
22	11.9	11.8	11.8	11.5	10.7	11.3	11.0	10.1	10.5	9.5	8.7	9.1
23	12.1	11.9	11.9	11.2	11.0	11.1	10.5	9.5	10.1	9.3	8.7	9.0
24	12.2	12.0	12.1	11.0	10.8	10.9	10.3	8.9	9.5	8.9	8.4	8.7
25	12.2	11.8	12.0	11.1	10.6	11.0	9.8	8.3	9.1	9.2	8.8	9.0
26	11.8	11.6	11.6	11.4	11.1	11.2	9.7	7.8	8.7	9.9	9.1	9.6
27	11.6	11.4	11.5	12.4	11.4	11.7	10.3	8.9	9.6	9.1	8.9	9.0
28	11.8	11.5	11.6	12.5	11.3	11.9	11.1	9.3	10.2	9.3	8.8	9.0
29	---	---	---	11.7	11.2	11.5	11.1	9.6	10.4	9.2	8.8	9.0
30	---	---	---	11.6	11.2	11.4	10.9	8.8	9.9	9.3	8.7	8.9
31	---	---	---	11.6	10.9	11.2	---	---	---	9.3	8.3	8.8
MONTH	14.3	11.4	12.5	13.4	10.3	11.6	11.2	7.8	10.3	11.3	7.5	9.1

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.0	7.7	8.9	8.5	5.4	7.0	---	---	---	6.4	5.0	5.8
2	11.3	7.5	9.2	7.8	5.9	6.8	---	---	---	7.0	5.7	6.4
3	8.8	7.1	8.1	5.7	4.1	4.8	---	---	---	7.0	5.5	6.1
4	9.3	7.1	8.1	4.8	3.9	4.5	---	---	---	7.8	5.5	6.6
5	8.1	6.8	7.4	6.3	1.9	4.5	---	---	---	9.9	6.6	8.0
6	8.3	6.7	7.4	8.9	6.0	7.5	---	---	---	10.1	6.8	8.3
7	8.3	6.5	7.6	11.6	6.9	9.2	---	---	---	9.0	6.8	7.8
8	8.1	6.9	7.6	11.8	7.4	9.9	---	---	---	---	---	---
9	8.1	7.2	7.6	10.7	7.0	8.9	---	---	---	---	---	---
10	9.1	7.1	8.0	8.5	4.9	6.7	---	---	---	---	---	---
11	10.2	7.1	8.5	8.4	3.7	6.3	---	---	---	---	---	---
12	11.0	7.0	9.0	11.1	5.0	7.9	---	---	---	---	---	---
13	9.2	6.2	7.1	9.7	5.6	7.1	---	---	---	---	---	---
14	9.1	7.0	8.2	---	---	---	---	---	---	10.6	8.5	9.5
15	10.2	7.6	8.7	---	---	---	---	---	---	9.4	7.9	8.4
16	10.3	7.6	9.0	---	---	---	8.4	7.0	7.9	8.8	7.2	7.9
17	9.0	7.3	8.0	---	---	---	10.3	5.6	7.8	8.4	7.1	7.8
18	9.9	7.3	8.5	---	---	---	11.5	5.7	8.4	9.6	7.3	8.2
19	11.4	7.3	8.9	---	---	---	11.1	5.9	8.5	8.1	6.7	7.3
20	11.3	7.6	9.3	---	---	---	9.6	5.8	7.7	8.2	6.4	7.1
21	9.7	6.5	7.7	---	---	---	10.7	7.5	8.7	8.0	6.5	7.2
22	7.0	5.2	6.1	---	---	---	12.3	7.2	9.2	7.5	6.8	7.2
23	7.6	4.9	6.1	---	---	---	12.5	8.3	10.0	9.0	7.5	8.1
24	7.6	4.9	6.3	11.8	8.1	10.7	11.0	7.6	9.2	9.2	7.6	8.3
25	10.7	5.4	7.8	10.2	7.1	8.3	10.5	5.0	7.3	---	---	---
26	8.8	6.5	7.7	11.4	5.7	9.0	9.5	4.9	6.9	---	---	---
27	9.3	5.6	7.6	9.9	6.9	8.5	8.0	6.3	7.1	---	---	---
28	9.4	5.4	7.3	---	---	---	6.8	6.0	6.5	---	---	---
29	8.4	5.3	6.9	---	---	---	7.4	6.4	6.9	---	---	---
30	7.9	4.7	6.5	---	---	---	6.8	6.0	6.4	---	---	---
31	---	---	---	---	---	---	7.9	5.4	6.4	---	---	---
MONTH	11.4	4.7	7.8	11.8	1.9	7.5	12.5	4.9	7.8	10.6	5.0	7.6

RESERVOIRS IN SCHUYLKILL RIVER BASIN

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30", Schuylkill County, Hydrologic Unit 02040203, at dam on Still Creek, 1 mi (1.6 km) upstream from mouth and 2.3 mi (3.7 km) north of Hometown, Pa. DRAINAGE AREA, 8.5 mi^2 (22.0 km^2). PERIOD OF RECORD, January 1933 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).

Reservoir formed by earthfill dam, with ungated concrete spillway at elevation 1,182.00 ft (360.274 m). Storage began in February 1933. Capacity at elevation 1,182.00 ft (360.274 m) is 8,290 acre-ft (10.2 hm^3). Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by Panther Valley Water Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 8,570 acre-ft (10.6 hm^3) Oct. 15, 1955 (elevation, 1,182.92 ft or 360.554 m), but may have been greater during 1950 and 1951 water years; minimum (after first filling), 588 acre-ft (0.725 hm^3) Dec. 8, 1944 (elevation, 1,136.70 ft or 346.466 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 8,460 acre-ft (10.4 hm^3) Mar. 27 (elevation, 1,182.56 ft or 360.444 m); minimum, 7,310 acre-ft (9.01 hm^3) Sept. 30 (elevation, 1,178.58 ft or 359.231 m).

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, Hydrologic Unit 02040203, at dam on Perkiomen Creek, 0.4 mi (0.6 km) west of Green Lane and 2.1 mi (3.4 km) upstream from Unami Creek. DRAINAGE AREA, 70.9 mi^2 (183.6 km^2). PERIOD OF RECORD, December 1956 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Philadelphia Suburban Water Co.).

Reservoir formed by concrete, gravity-type dam, with ungated spillway at elevation 286.00 ft (87.173 m). Storage began December 21, 1956. Capacity at spillway level (elevation 286.00 ft or 87.173 m), 13,430 acre-ft (16.6 hm^3). Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished by valves on pipe through dam. Records furnished by Philadelphia Suburban Water Co.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 17,030 acre-ft (21.0 hm^3) June 23, 1972 (elevation, 290.05 ft or 88.407 m); minimum (after first filling), 1,270 acre-ft (1.57 hm^3) Aug. 25, 1957 (elevation, 251.60 ft or 76.688 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 14,870 acre-ft (18.3 hm^3) Jam. 25 (elevation, 287.62 ft or 87.667 m); minimum, 10,940 acre-ft (13.5 hm^{3}0 Oct. 19 (elevation, 282.86 ft or 86.216 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)
	01469200	Still Creek Reservoir		01472200	Green Lane Reservoir	
Sept. 30, 1977	1,176.00	6,600	--	285.15	12,680	--
Oct. 31	1,178.42	7,270	+10.9	285.90	13,340	+10.7
Nov. 30	1,182.12	8,320	+17.6	286.82	14,160	+13.8
Dec. 31	1,182.08	8,310	- 0.2	286.06	13,490	-10.9
CAL YR 1977	--	--	0	--	--	+ 0.2
Jan. 31	1,182.17	8,340	+ 0.5	286.15	13,560	+ 1.1
Feb. 28	1,182.00	8,290	- 0.9	286.06	13,490	- 1.3
Mar. 31	1,182.38	8,400	+ 1.8	286.19	13,600	+ 1.8
Apr. 30	1,182.02	8,290	- 1.8	285.99	13,420	- 3.0
May 31	1,182.08	8,310	+ 0.3	286.05	13,480	+ 1.0
June 30	1,181.75	8,210	- 1.7	285.95	13,390	- 1.5
July 31	1,181.25	8,070	- 2.3	286.00	13,430	+ 0.7
Aug. 31	1,180.17	7,750	- 5.2	286.07	13,490	+ 1.0
Sept. 30	1,178.58	7,310	- 7.4	285.65	13,120	- 6.2
WTR YR 1978	--	--	+ 1.0	--	--	+ 0.6

01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA

LOCATION.--Lat 40°01'21", long 75°25'20", Chester County, Hydrologic Unit 02040202, on left bank 125 ft (38 m) upstream from bridge on Waterloo Road, 2 mi (3.2 km) south of Devon, and 2.5 mi (4.0 km) northwest of Newtown Square.

DRAINAGE AREA.--5.15 mi² (13.3 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 310 ft (94 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--6 years, 10.3 ft³/s (0.292 m³/s), 27.23 in/yr (692 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) Aug. 28, 1978, gage height, 5.58 ft (1.701 m); minimum, 0.86 ft³/s (0.024 m³/s) Nov. 11, 1976; minimum gage height, 1.36 ft (0.415 m) Nov. 9, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft³/s (5.66 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)	Date	Time	Discharge (ft³/s	(m³/s)	Gage Height (ft)	(m)
Nov. 7	0600	200	5.66	3.35	1.021	Mar. 26	2030	288	8.16	3.71	1.131
Nov. 8	0045	700	19.8	4.91	1.497	Mar. 27	0715	202	5.72	3.36	1.024
Dec. 18	1400	352	9.97	3.97	1.210	June 21	2100	582	16.5	4.63	1.411
Jan. 9	0430	225	6.37	3.46	1.055	July 3	1830	280	7.93	3.68	1.122
Jan. 26	0700	920	26.1	5.36	1.634	July 27	2345	275	7.79	3.66	1.116
Mar. 14	1600	308	8.72	3.79	1.155	Aug. 28	0600	*1,040	29.5	*5.58	1.701

Minimum discharge, 2.7 ft³/s (0.076 m³/s) Aug. 23, 26; minimum gage height, 1.45 ft (0.442 m) Sept. 28, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.5	28	11	15	8.4	15	8.2	8.9	4.5	9.2	9.2
2	4.0	4.6	12	11	15	8.3	15	8.2	8.5	4.7	6.6	5.5
3	3.4	6.9	11	10	14	8.9	14	8.2	8.5	76	6.9	4.9
4	3.2	6.9	9.8	9.3	13	8.5	14	9.9	8.9	17	6.9	4.7
5	3.0	4.9	14	9.3	12	8.0	15	11	8.2	9.6	6.9	4.5
6	3.6	4.7	12	9.9	13	8.0	13	9.2	11	7.9	10	4.5
7	3.1	84	9.5	10	13	7.2	13	8.2	13	6.9	6.6	4.8
8	3.1	112	8.8	17	13	6.9	12	9.6	21	6.6	6.6	4.3
9	19	13	9.0	66	12	6.9	12	33	9.6	6.4	4.9	4.0
10	6.0	11	7.8	13	12	7.4	11	13	7.9	6.1	6.1	3.6
11	4.3	14	7.7	11	12	9.1	12	9.9	7.2	5.5	4.9	3.8
12	3.9	9.1	7.2	11	11	13	12	8.9	6.9	5.5	4.7	9.6
13	3.6	8.1	7.8	13	11	19	11	9.6	11	5.2	4.5	6.4
14	7.0	7.5	23	29	11	72	10	48	7.2	8.9	4.3	4.0
15	8.6	7.3	18	14	10	101	9.9	16	6.6	6.6	4.0	4.3
16	4.7	6.9	11	12	9.7	64	9.6	26	6.4	9.6	4.0	4.9
17	6.9	10	9.7	16	9.5	27	9.6	19	6.6	11	3.8	4.3
18	4.7	8.0	97	50	9.5	16	9.6	28	6.4	6.4	3.6	3.8
19	7.9	8.1	28	17	9.5	23	17	15	6.1	5.5	3.4	5.8
20	5.2	9.1	17	16	9.1	27	25	13	5.8	4.9	3.2	3.8
21	4.3	8.4	54	14	9.2	55	12	12	63	4.7	3.0	3.8
22	4.1	7.3	18	13	9.1	90	11	12	17	4.5	3.0	5.5
23	4.0	25	16	12	9.0	26	9.9	11	8.9	4.3	3.0	3.8
24	3.9	9.9	15	12	8.9	15	9.9	40	8.5	3.8	3.0	3.4
25	3.8	13	18	59	9.5	13	9.6	14	7.6	4.7	3.0	3.4
26	4.6	36	14	266	9.0	68	9.2	12	7.2	4.3	3.0	3.2
27	7.6	11	12	40	8.7	85	9.2	11	7.9	26	4.7	3.2
28	5.1	9.7	12	25	8.6	24	8.9	11	6.6	25	114	3.2
29	4.7	11	11	19	---	21	8.5	10	5.5	5.8	6.6	3.0
30	4.6	13	11	18	---	19	8.5	9.9	4.7	5.2	5.5	4.3
31	4.5	---	12	16	---	17	---	9.2	---	17	9.9	---
TOTAL	160.9	484.9	541.3	849.5	306.3	882.6	356.4	464.0	312.6	320.1	269.8	136.7
MEAN	5.19	16.2	17.5	27.4	10.9	28.5	11.9	15.0	10.4	10.3	8.70	4.56
MAX	19	112	97	266	15	101	25	48	63	76	114	9.6
MIN	3.0	4.5	7.2	9.3	8.6	6.9	8.5	8.2	4.7	3.8	3.0	3.0
CFSM	1.01	3.15	3.40	5.32	2.12	5.53	2.31	2.91	2.02	2.00	1.69	.89
IN.	1.16	3.50	3.91	6.14	2.21	6.37	2.57	3.35	2.26	2.31	1.95	.99

CAL YR 1977 TOTAL 3177.1 MEAN 8.70 MAX 112 MIN 1.9 CFSM 1.69 IN 22.94
WTR YR 1978 TOTAL 5085.1 MEAN 13.9 MAX 266 MIN 3.0 CFSM 2.70 IN 36.72

01475300 DARBY CREEK AT WATERLOO MILLS NEAR DEVON, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 31...	1130	230	7.4	11.0	11.2	110	31	24	11	15

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 31...	3.1	91	0	75	5.0	22	23	.1	16	167

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 31...	159	2.6	.01	2.6	.05	.38	.43	3.0	.27	.25

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 31...	4	0	0	3	90	3	30	0	10

01475510 DARBY CREEK NEAR DARBY, PA

LOCATION.--Lat 39°55'44", long 75°16'22", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft (9 m) upstream from Providence Road Bridge, 1.1 mi (1.8 km) northwest of Upper Darby, 2.3 mi (3.7 km) upstream from Cobbs Creek, and 8.4 mi (13.5 km) upstream from mouth.

DRAINAGE AREA.--37.4 mi^2 (96.9 km^2).

PERIOD OF RECORD.--February 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 19.41 ft (5.916 m) National Geodetic Vertical Datum of 1929. Prior to May 9, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 69.5 ft^3/s (1.968 m^3/s), 25.25 in/yr (641 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,920 ft^3/s (168 m^3/s) Aug. 23, 1974, gage height, 10.23 ft (3.118 m), from rating curve extended above 920 ft^3/s (26 m^3/s) on basis of step-backwater analysis; minimum, 8.8 ft^3/s (0.25 m^3/s) Sept. 2, 1966, gage height, 1.16 ft (0.354 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	0715	1,060	30.0	4.29	1.308	Mar. 14	1845	1,130	32.0	4.42	1.347
Nov. 8	0015	*2,650	75.0	*6.99	2.131	Mar. 27	0015	1,080	30.6	4.33	1.320
Dec. 1	0230	818	23.2	3.75	1.143	Mar. 27	0945	939	26.6	4.02	1.225
Dec. 18	----	1,150	32.6	Unknown		May 24	0845	1,300	36.8	4.77	1.454
Dec. 21	----	850	24.1	Unknown		June 7	1600	2,340	66.3	6.55	1.996
Jan. 9	----	1,050	29.7	Unknown		July 3	1845	2,150	60.9	6.29	1.917
Jan. 26	----	1,500	42.5	Unknown		Aug. 28	0945	1,560	44.2	5.28	1.609

Minimum discharge, 22 ft^3/s (0.62 m^3/s) Oct. 6, Sept. 29, 30; minimum gage height, 1.31 ft (0.399 m) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	34	225	70	80	56	97	50	63	36	70	54
2	34	34	75	67	80	56	92	50	60	36	42	35
3	26	39	65	64	75	58	91	49	59	629	44	32
4	24	45	60	60	70	48	94	64	61	148	47	31
5	23	38	100	60	65	44	105	79	76	63	71	30
6	26	37	70	65	70	45	89	58	55	52	105	29
7	25	588	58	70	70	44	94	52	284	47	50	28
8	24	675	52	150	70	43	85	70	114	45	42	27
9	195	75	55	500	65	44	80	218	76	43	36	29
10	46	57	51	90	65	45	78	95	57	44	54	27
11	29	77	58	70	65	63	79	60	54	40	42	27
12	27	52	71	65	60	94	91	55	53	38	36	77
13	25	46	47	90	61	138	75	55	85	37	34	55
14	43	44	152	200	62	416	74	316	54	48	36	28
15	64	44	129	90	61	258	74	113	49	56	32	29
16	77	44	60	70	60	138	72	166	49	48	31	30
17	78	70	50	100	61	112	72	141	50	81	30	35
18	33	48	700	350	58	96	71	214	51	45	28	28
19	34	39	150	100	56	126	120	97	49	38	27	46
20	42	39	100	86	56	119	177	82	47	37	27	28
21	28	41	500	78	57	112	71	72	91	35	26	26
22	25	42	110	67	58	143	64	68	153	33	26	27
23	24	194	90	66	58	96	60	66	50	32	26	31
24	23	59	85	66	57	88	60	404	46	30	25	25
25	23	71	100	400	60	81	57	107	45	33	26	25
26	32	216	90	1500	62	376	57	82	44	33	27	24
27	42	59	80	200	59	560	60	76	56	68	34	24
28	41	54	75	120	57	151	55	75	43	194	529	24
29	36	66	70	100	---	120	53	71	40	40	47	23
30	36	88	70	90	---	106	53	68	38	37	36	23
31	34	---	80	80	---	99	---	88	---	94	64	---
TOTAL	1253	3015	3678	5184	1778	3975	2400	3261	2052	2240	1750	957
MEAN	40.4	101	119	167	63.5	128	80.0	105	68.4	72.3	56.5	31.9
MAX	195	675	700	1500	80	560	177	404	284	629	529	77
MIN	23	34	47	60	56	43	53	49	38	30	25	23
CFSM	1.08	2.70	3.18	4.47	1.70	3.42	2.14	2.81	1.83	1.93	1.51	.85
IN.	1.25	3.00	3.66	5.16	1.77	3.95	2.39	3.24	2.04	2.23	1.74	.95

CAL YR 1977 TOTAL 21157 MEAN 58.0 MAX 700 MIN 13 CFSM 1.55 IN 21.04
WTR YR 1978 TOTAL 31543 MEAN 86.4 MAX 1500 MIN 23 CFSM 2.31 IN 31.37

01475530 COBBS CREEK AT U. S. HIGHWAY NO. 1 AT PHILADELPHIA, PA

LOCATION.--Lat 39 59'29", long 75 16'49", Philadelphia County, Hydrologic Unit 02040203, on left bank 30 ft (9 m) downstream from bridge on U. S. Highway No. 1 and 50 ft (15 m) upstream from unnamed tributary at west city limits of Philadelphia.

DRAINAGE AREA.--4.78 mi² (12.4 km²).

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1973 published as "near Philadelphia".

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 121.76 ft (37.112 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 7.22 ft³/s (0.204 m³/s), 20.51 in/yr (521 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft³/s (98.6 m³/s) Aug. 23, 1974, gage height, 10.48 ft (3.194 m), from rating curve extended above 160 ft³/s (4.5 m³/s) on basis of computation of flow through culvert at gage height 9.18 ft (2.798 m); minimum, 0.3 ft³/s (0.008 m³/s) Oct. 13, Nov. 24, 25, 1965; minimum gage height, 2.03 ft (0.619 m) Nov. 25, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	2315	*425	12.0	*5.50	1.676	July 3	1845	291	8.24	4.94	1.506

Minimum discharge, 3.0 ft³/s (0.085 m³/s) Nov. 5, Aug. 20, 21, 24; minimum gage height, 2.23 ft (0.680 m) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	3.2	40	9.8	7.2	5.0	7.6	4.7	5.8	4.4	9.2	8.0
2	3.6	3.2	8.8	9.8	6.8	4.9	7.1	4.3	5.5	4.4	5.2	5.0
3	3.6	5.8	7.8	9.1	6.5	5.3	7.1	4.3	5.5	94	5.2	4.5
4	3.4	4.4	7.5	9.1	6.2	5.3	7.4	9.2	5.2	13	5.5	4.2
5	3.4	3.2	20	8.9	5.9	4.8	9.9	8.8	5.5	7.1	11	4.0
6	4.7	3.4	8.8	9.4	5.5	4.9	6.8	6.0	4.9	5.8	17	5.5
7	3.6	120	7.1	9.4	6.5	4.7	7.5	4.8	22	5.5	6.1	5.0
8	3.9	52	6.8	20	5.5	4.4	6.8	14	11	4.9	4.7	4.5
9	40	8.8	7.5	36	5.2	4.7	6.9	32	7.5	4.7	4.4	4.3
10	4.7	8.2	6.5	7.2	5.0	5.1	6.8	7.1	6.1	4.7	11	4.2
11	3.6	9.9	6.1	6.4	4.8	8.5	8.2	5.5	6.1	4.4	8.8	4.2
12	3.4	6.1	6.1	6.0	4.6	13	7.0	5.1	5.8	4.1	4.9	20
13	3.2	5.5	6.8	9.3	4.5	17	5.8	5.4	12	4.1	9.2	7.8
14	14	5.2	29	35	5.5	35	5.8	41	5.8	8.2	5.2	6.5
15	14	5.8	13	7.1	5.0	26	5.5	9.9	5.5	5.8	4.4	6.5
16	18	6.1	6.8	6.0	4.5	13	5.4	24	5.2	5.8	4.1	6.5
17	17	16	6.5	17	4.5	14	5.5	13	5.5	9.9	4.1	4.1
18	4.7	5.8	63	58	4.5	9.1	5.5	23	5.2	4.9	3.6	4.1
19	4.7	5.2	14	8.7	4.5	13	18	7.4	4.9	4.7	3.6	7.5
20	8.8	4.9	10	8.6	4.5	9.8	17	6.5	4.7	4.4	3.4	3.9
21	3.9	5.5	69	7.1	4.5	11	6.5	5.8	13	4.1	3.4	3.6
22	3.6	6.5	9.6	6.5	4.5	14	5.8	5.6	7.8	3.9	3.4	4.4
23	4.1	47	7.7	6.2	5.0	7.5	5.5	5.3	4.9	3.9	3.4	3.6
24	3.4	21	7.2	6.3	5.1	6.7	5.4	66	4.9	3.6	3.2	3.4
25	3.2	15	16	68	6.0	6.2	5.3	14	4.9	4.1	3.4	3.4
26	4.4	28	6.9	126	6.0	65	5.2	8.2	4.7	3.9	4.4	3.2
27	13	7.5	6.2	15	6.0	56	5.2	7.1	7.8	7.5	4.1	3.2
28	3.9	7.1	5.9	10	5.4	12	5.1	6.8	4.4	11	28	3.2
29	3.4	11	5.7	8.8	---	9.6	4.9	6.5	4.4	4.7	5.2	3.2
30	3.4	13	7.9	8.1	---	8.3	4.8	6.1	4.4	4.4	6.5	3.2
31	3.2	---	12	7.6	---	8.0	---	9.2	---	16	17	---
TOTAL	218.9	444.3	436.2	560.4	149.7	411.8	211.3	376.6	200.9	271.9	212.6	154.7
MEAN	7.06	14.8	14.1	18.1	5.35	13.3	7.04	12.1	6.70	8.77	6.86	5.16
MAX	40	120	69	126	7.2	65	18	66	22	94	28	20
MIN	3.2	3.2	5.7	6.0	4.5	4.4	4.8	4.3	4.4	3.6	3.2	3.2
CFSM	1.48	3.10	2.95	3.79	1.12	2.78	1.47	2.53	1.40	1.84	1.44	1.08
IN.	1.70	3.46	3.39	4.36	1.16	3.20	1.64	2.93	1.56	2.12	1.65	1.20

CAL YR 1977 TOTAL 2745.4 MEAN 7.52 MAX 120 MIN 1.5 CFSM 1.57 IN 21.36
WTR YR 1978 TOTAL 3649.3 MEAN 10.0 MAX 126 MIN 3.2 CFSM 2.09 IN 28.39

01475545 NAYLOR CREEK AT WEST CHESTER PIKE NEAR PHILADELPHIA, PA

LOCATION.--Lat 39°58'13", long 75°18'11", Delaware County, Hydrologic Unit 02040203, on right bank 200 ft (60 m) north of West Chester Pike 0.4 mi (0.6 km) west of intersection of West Chester Pike and U.S. Highway 1 and 8 mi (13 km) west of City Hall, Philadelphia.

DRAINAGE AREA.--1.10 mi² (2.85 km²).

PERIOD OF RECORD.--June 1972 ro September 1978 (discontinued).

REVISED RECORDS.--WDR PA-74: 1972(M), 1973.

GAGE.--Water-stage recorder, concrete control, and crest-stage gage. Altitude of gage is 215 ft (65.5 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--6 years, 1.76 ft³/s (0.050 m³/s), 21.79 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 568 ft³/s (16.1 m³/s) Aug. 23, 1974, gage height, 6.58 ft (2.006 m), from rating curve extended above 90 ft³/s (2.55 m³/s) on basis of computation of peak flow through culvert and flow-over-road measurement; minimum, 0.08 ft³/s (0.002 m³/s) Jan. 1, 1977, gage height, 0.18 ft (0.055 m), result of freezeup; minimum daily, 0.24 ft³/s (0.007 m³/s) Sept. 12-16, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.25 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	Unknown	270	7.65	2.41	0.735	June 7	1850	288	8.16	2.55	0.777
Jan. 26	0510	156	4.42	1.65	0.503	July 3	1400	188	5.32	1.85	0.564
Mar. 14	1505	238	6.74	2.18	0.664	July 27	2125	221	6.26	2.06	0.628
May 24	1025	185	5.24	1.83	0.558	Aug. 28	0505	*383	10.8	*3.43	1.045
May 31	1630	261	7.39	2.34	0.713	Sept. 11	1825	255	7.22	2.30	0.701

Minimum observed discharge, 0.12 ft³/s (0.003 m³/s) Oct. 7, gage height, 0.20 ft (0.061 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.65	10	.97	1.0	.65	.87	.67	.89	.55	1.5	.91
2	.34	.65	1.5	.97	1.0	.79	.87	.65	.78	.56	.91	.47
3	.33	1.4	1.0	.97	.87	.87	.87	.65	.76	33	.66	.47
4	.33	.75	.90	.97	.87	.97	1.3	1.7	.76	1.5	.65	.42
5	.33	.65	5.0	.97	.87	.87	1.1	1.1	1.1	.89	1.7	.40
6	.50	.70	1.2	.97	.87	.87	.76	.76	.76	.87	2.1	.40
7	.35	30	.90	1.1	.87	.87	.87	.56	14	.76	.60	.39
8	.40	1.0	.85	3.7	.87	.87	.76	2.4	1.7	.76	.56	.40
9	10	2.0	1.0	8.1	.87	.87	.76	5.5	1.1	.76	.56	.40
10	.50	1.5	1.0	.97	.87	1.3	.76	.81	.78	.77	2.5	.40
11	.40	2.5	.87	.85	.87	2.3	1.1	.66	.76	.66	.74	.50
12	.35	.80	.87	.85	.87	3.5	.87	.75	.76	.65	.56	5.0
13	.33	.75	.87	4.0	.87	3.7	.87	.88	3.8	.65	.90	.60
14	3.5	.70	6.1	6.4	.87	12	.76	9.1	.76	2.4	.56	.40
15	2.5	.80	2.6	1.1	.87	2.4	.76	1.1	.76	1.5	.47	.40
16	4.5	1.0	1.1	.85	.87	1.4	.76	4.7	.76	.88	.47	.60
17	3.0	4.0	1.0	7.7	.87	1.8	.76	2.0	.76	2.1	.47	.40
18	.70	1.0	22	11	.87	1.0	.76	4.7	.76	.61	.47	.40
19	.60	.80	2.8	1.2	.87	1.3	3.1	1.1	.76	.56	.47	1.1
20	2.0	.75	2.5	1.4	.87	1.0	4.4	1.0	.76	.56	.47	.40
21	.70	.90	17	1.1	.87	1.3	.87	.99	3.0	.56	.47	.40
22	.60	1.5	1.4	.97	.87	1.6	.76	.87	.87	.56	.47	.40
23	.80	11	1.1	.97	.87	.87	.76	.87	.67	.56	.47	.40
24	.70	3.5	1.1	.97	1.1	.76	.76	21	.65	.56	.47	.40
25	.60	2.5	3.1	19	1.3	.76	.76	1.5	.65	.61	.47	.40
26	1.0	6.5	1.1	30	.87	13	.76	1.3	.65	.56	.47	.40
27	3.0	1.0	.97	1.7	.87	8.9	.76	1.3	.97	8.7	.50	.40
28	.75	.85	.97	1.2	.65	1.4	.76	1.1	.65	1.2	18	.40
29	.70	2.0	.97	1.1	---	1.1	.76	1.1	.65	.65	.53	.40
30	.75	2.5	1.1	1.1	---	.87	.76	1.1	.65	.65	.47	.40
31	.70	---	1.2	1.1	---	.87	---	12	---	3.4	2.0	---
TOTAL	42.02	84.65	94.07	114.25	25.06	70.76	30.77	83.92	42.68	69.00	41.64	18.46
MEAN	1.36	2.82	3.03	3.69	.90	2.28	1.03	2.71	1.42	2.23	1.34	.62
MAX	10	30	22	30	1.3	13	4.4	21	14	33	18	5.0
MIN	.33	.65	.85	.85	.65	.65	.76	.56	.65	.55	.47	.39
CFSM	1.24	2.56	2.76	3.36	.82	2.07	.94	2.46	1.29	2.03	1.22	.56
IN.	1.42	2.86	3.18	3.86	.85	2.39	1.04	2.84	1.44	2.33	1.41	.62

CAL YR 1977 TOTAL 597.61 MEAN 1.64 MAX 30 MIN .24 CFSM 1.49 IN 20.19
WTR YR 1978 TOTAL 717.28 MEAN 1.97 MAX 33 MIN .33 CFSM 1.79 IN 24.24

01475550 COBBS CREEK AT DARBY, PA

LOCATION.--Lat 39°55'02", long 75°14'52", Delaware County, Hydrologic Unit 02040202, on right bank at Darby, 60 ft (18 m) upstream from dam, 200 ft (61 m) upstream from bridge on Woodland Avenue, and 1.1 mi (1.8 km) upstream from mouth.

DRAINAGE AREA.--22.0 mi² (57.0 km²).

PERIOD OF RECORD.--February 1964 to current year.

REVISED RECORDS.--WDR PA-75-1: 1974(M)

GAGE.--Water-stage recorder and masonry control. Datum of gage is 11.93 ft (3.636 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 29, 1964, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--14 years, 29.9 ft³/s (0.847 m³/s), 18.47 in/yr (469 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,490 ft³/s (127 m³/s) June 29, 1973, gage height, 10.98 ft (3.347 m), from rating curve extended above 850 ft³/s (24.1 m³/s) on basis of computation of peak flow through culvert; maximum gage height, 12.85 ft (3.917 m) Aug. 23, 1974, backwater from storage tank; no flow on many days in 1964-66.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	0100	1,610	45.6	5.34	1.628	June 7	1715	*1,750	49.6	*5.63	1.716
Jan. 18	0015	1,250	35.4	4.55	1.387	July 3	1900	1,650	46.7	5.42	1.652
Jan. 26	0630	1,490	42.2	5.08	1.548	Aug. 28	0545	1,530	43.3	5.17	1.576
May 24	0900	1,200	34.0	4.45	1.356	Sept.12	2000	1,280	36.2	4.63	1.411

Minimum discharge, 7.3 ft³/s (0.21 m³/s) Oct. 8, gage height, 1.36 ft (0.415 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	8.6	232	21	24	15	24	15	18	11	45	41
2	11	8.7	18	22	24	15	22	14	16	11	12	20
3	7.9	12	15	20	22	17	24	14	16	530	20	17
4	7.7	15	14	19	21	17	26	39	16	53	17	15
5	7.7	8.5	91	19	21	14	31	34	31	20	67	13
6	11	8.7	26	21	19	16	21	20	15	16	59	25
7	8.4	550	17	21	24	15	25	16	275	15	32	24
8	8.1	301	17	82	22	14	20	43	49	13	14	11
9	196	19	17	224	21	16	19	180	26	13	12	11
10	13	14	15	22	20	18	19	25	18	16	34	10
11	9.4	19	18	22	19	34	21	19	17	13	53	11
12	9.2	12	25	20	19	43	25	18	16	12	15	136
13	9.0	11	14	63	19	51	18	17	49	12	25	37
14	44	11	145	195	21	158	17	155	16	32	21	26
15	43	11	31	25	19	57	17	37	15	29	13	26
16	85	10	14	20	18	61	17	91	15	34	13	26
17	54	47	13	96	18	39	18	43	16	53	13	28
18	12	15	362	285	18	28	18	86	15	13	11	26
19	12	11	41	29	15	29	72	24	15	12	12	43
20	20	11	26	26	19	25	111	21	14	12	11	21
21	9.8	11	310	25	18	28	20	20	55	12	11	13
22	9.2	14	26	21	18	39	18	18	32	13	11	18
23	9.2	152	21	20	18	22	17	18	13	14	11	24
24	8.7	15	20	20	18	21	18	290	12	12	11	15
25	8.6	37	53	368	21	20	18	29	12	11	11	13
26	13	109	19	640	20	300	18	21	12	10	11	12
27	41	15	17	53	18	251	18	20	25	74	14	12
28	10	14	16	31	16	35	17	19	13	86	290	13
29	8.7	26	15	26	---	28	16	18	12	12	28	12
30	8.7	38	18	25	---	26	15	17	11	11	19	15
31	8.6	---	26	24	---	25	---	41	---	82	61	---
TOTAL	722.9	1534.5	1692	2505	550	1477	740	1422	865	1257	977	714
MEAN	23.3	51.2	54.6	80.8	19.6	47.6	24.7	45.9	28.8	40.5	31.5	23.8
MAX	196	550	362	640	24	300	111	290	275	530	290	136
MIN	7.7	8.5	13	19	15	14	15	14	11	10	11	10
CFSM	1.06	2.33	2.48	3.67	.89	2.16	1.12	2.09	1.31	1.84	1.43	1.08
IN.	1.22	2.59	2.86	4.24	.93	2.50	1.25	2.40	1.46	2.13	1.65	1.21

CAL YR 1977 TOTAL 12244.5 MEAN 33.5 MAX 550 MIN 5.2 CFSM 1.52 IN 20.70
WTR YR 1978 TOTAL 14456.4 MEAN 39.6 MAX 640 MIN 7.7 CFSM 1.80 IN 24.44

01476030 LITTLE CRUM CREEK AT MICHIGAN AVENUE, SWARTHMORE, PA

LOCATION.--Lat 39°53'42", long 75°20'19", Delaware County, Hydrologic Unit 02040202, on left bridge abutment at Michigan Avenue, Ridley Township, Swarthmore.

DRAINAGE AREA.--1.15 mi² (2.98 km²).

PERIOD OF RECORD.--May 1971 to September 1978 (discontinued).

GAGE.--.Water-stage recorder and concrete and rock control. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--7 years, 1.42 ft³/s (0.040 m³/s), 16.82 in/yr (427 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 605 ft³/s (17.1 m³/s) Sept. 13, 1971, gage height, 9.77 ft (2.978 m), from crest-stage indicator, from rating curve extended above 50 ft³/s (1.4 m³/s); minimum, 0.02 ft³/s (0.001 m³/s) Sept. 16, 17, 1972; minimum gage height, 1.40 ft (0.427 m) Aug. 20, 22, 24, 26, Sept. 26, 29, 30,1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 7	2345	*268	7.59	*5.54	1.689	July 3	1655	111	3.14	4.18	1.274
June 7	1550	122	3.46	4.30	1.311	Aug. 28	0520	153	4.33	4.60	1.402

Minimum discharge, 0.21 ft³/s (0.006 m³/s) Oct. 3, 4, 5; minimum gage height, 1.40 ft (0.427 m) Aug. 20, 22, 24, 26, Sept. 26, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.55	6.7	.83	1.3	.76	1.0	1.1	1.1	.53	1.0	.77
2	.25	.62	1.0	.82	1.3	.76	1.0	1.1	1.0	.55	.57	.42
3	.22	.91	.95	.80	1.3	.78	1.1	1.1	1.0	18	.59	.41
4	.21	.44	.90	.77	1.2	.78	1.1	1.5	1.0	1.1	.62	.40
5	.21	.44	2.0	.76	1.2	.78	1.0	1.2	1.2	.76	1.5	.40
6	.23	.47	1.0	.80	1.6	.76	1.1	1.3	1.0	.70	1.4	.37
7	.24	21	.90	.80	2.0	.73	1.1	1.1	8.1	.69	1.0	.37
8	.28	9.5	.83	1.8	1.2	.72	1.1	1.6	1.5	.70	.63	.40
9	2.8	.96	.83	3.4	1.2	.74	1.1	3.5	.77	.71	.59	.40
10	.33	.97	.80	.89	1.2	.83	1.1	1.2	.66	.80	.69	.38
11	.27	1.0	.78	.82	1.2	1.2	1.1	1.1	.63	.61	.61	.38
12	.25	.98	.76	.80	1.1	1.8	1.1	1.1	.64	.59	.60	.42
13	.25	.96	.78	1.8	1.1	2.0	1.1	1.0	.73	.59	.90	.40
14	.51	.96	3.3	3.1	1.1	4.9	1.1	3.1	.62	.70	.59	.38
15	.31	.96	1.3	.95	1.1	1.8	1.1	1.3	.63	.68	.57	.42
16	.55	.96	.88	.82	1.1	1.5	1.1	2.6	.62	.63	.58	.40
17	.53	1.1	.82	4.4	1.1	1.7	1.1	1.8	.65	1.0	.58	.41
18	.32	.96	11	4.5	1.1	1.2	1.1	2.1	.61	.60	.59	.45
19	.32	.96	1.5	1.0	1.1	1.1	1.9	1.2	.62	.59	.60	.89
20	.37	.80	1.1	1.6	1.0	1.0	2.6	1.2	.59	.59	.57	.32
21	.32	.82	5.1	.89	1.0	1.2	1.2	1.1	1.2	.59	.57	.31
22	.31	.86	1.0	.84	.96	1.2	1.1	1.1	.67	.60	.56	.32
23	.32	2.6	.93	.84	.98	.98	1.1	1.1	.57	.59	.56	.32
24	.32	.92	.89	.83	.93	.97	1.1	6.1	.56	.59	.55	.31
25	.32	2.0	1.6	7.9	.94	.96	1.1	1.4	.56	.69	.57	.31
26	.41	2.3	.91	17	.98	7.1	1.1	1.2	.57	.58	.56	.29
27	.89	.90	.86	1.8	.91	6.0	1.1	1.2	.68	.83	.87	.29
28	.42	.86	.84	1.5	.84	1.3	1.1	1.2	.56	.72	8.4	.29
29	.43	1.0	.82	1.4	---	1.1	1.1	1.1	.54	.58	.45	.29
30	.46	1.8	.86	1.4	---	1.1	1.1	1.1	.54	.57	.42	.28
31	.48	---	.87	1.4	---	1.1	---	1.1	---	1.6	.95	---
TOTAL	13.43	59.56	52.81	67.26	32.04	48.85	35.1	48.9	30.12	39.06	29.24	11.80
MEAN	.43	1.99	1.70	2.17	1.14	1.58	1.17	1.58	1.00	1.26	.94	.39
MAX	2.8	21	11	17	2.0	7.1	2.6	6.1	8.1	18	8.4	.89
MIN	.21	.44	.76	.76	.84	.72	1.0	1.0	.54	.53	.42	.28
CFSM	.37	1.73	1.48	1.89	.99	1.37	1.02	1.37	.87	1.10	.82	.34
IN.	.43	1.92	1.71	2.17	1.04	1.58	1.13	1.58	.97	1.26	.95	.38

CAL YR 1977 TOTAL 397.25 MEAN 1.09 MAX 21 MIN .10 CFSM .95 IN 12.84
WTR YR 1978 TOTAL 468.17 MEAN 1.28 MAX 21 MIN .21 CFSM 1.11 IN 15.13

01477000 CHESTER CREEK NEAR CHESTER, PA

LOCATION.--Lat 39°52'08", long 75°24'31", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft (9 m) downstream from Dutton Mill Bridge and 3 mi (5 km) northwest of Chester.

DRAINAGE AREA.--61.1 mi² (158.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1931 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR PA-72: 1971.

GAGE.--Water-stage recorder. Datum of gage is 23.41 ft (7.135 m) Penn Central Railroad datum Prior to June 27, 1966, water-stage recorder recorder at site 50 ft (15 m) upstream and June 28, 1966 to Oct. 4, 1967, nonnonrecording gage 150 ft (46 m) upstream, all at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--47 years, 84.3 ft³/s (2.39 m³/s), 18.74 in/yr (476 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s (595 m³/s) Sept. 13, 1971, gage height, 24.59 ft (7.495 m), from floodmark, from rating curve extended above 2,400 ft³/s (68.0 m³/s) on basis of contracted-opening measurement at gage height 13.57 ft (4.136 m) and slope-area measurement of peak flow; minimum, 0.3 ft³/s (0.008 m³/s) Aug. 7, 1934, gage height, 0.28 ft (0.085 m); minimum daily, 6.5 ft³/s (0.18 m³/s) Sept. 25, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage Height (ft)	Gage Height (m)
Nov. 8	0115	3,540	100	10.04	3.060	Mar. 26	2200	2,360	66.8	8.15	2.484
Dec. 18	1630	2,190	62.0	7.85	2.393	Mar. 27	0900	2,040	57.8	7.57	2.307
Jan. 9	0630	1,660	47.0	6.82	2.079	May 14	1300	2,100	59.5	7.69	2.344
Jan. 18	0415	1,680	47.6	6.85	2.088	June 21	2215	2,280	64.6	8.00	2.438
Jan. 26	1015	*5,320	151	*12.40	3.780	July 3	1845	3,180	90.1	9.52	2.902
Mar. 14	1800	2,280	64.6	8.01	2.441	Aug. 28	0815	2,020	57.2	7.54	2.298

Minimum discharge, 26ft³/s (0.74 m³/s) Oct. 4, 5, 8, gage height, 2.86 ft (0.872 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	41	474	101	150	89	176	101	105	72	136	110
2	41	42	126	101	140	87	153	99	101	72	85	79
3	33	79	101	93	130	91	146	99	99	974	77	68
4	31	133	89	87	125	89	165	108	105	480	83	65
5	28	60	119	87	115	85	180	157	105	139	95	60
6	29	50	136	91	110	83	149	119	108	105	219	60
7	32	970	93	97	128	83	168	108	198	93	99	58
8	29	1190	79	157	110	81	141	112	188	87	77	58
9	219	146	83	785	105	83	128	451	131	81	68	60
10	83	105	74	139	100	87	126	230	99	79	93	53
11	48	131	72	112	100	114	128	116	93	81	83	53
12	41	93	77	101	100	230	139	105	87	74	70	55
13	37	79	74	110	105	408	123	101	108	70	68	68
14	45	68	193	457	121	982	116	990	91	75	63	53
15	75	68	264	144	112	663	114	363	83	89	61	53
16	44	65	112	114	112	288	114	349	81	74	60	58
17	136	95	95	141	105	224	114	370	85	93	58	63
18	58	95	958	950	103	193	116	485	85	79	55	51
19	50	68	474	209	101	294	258	214	81	70	51	128
20	48	63	157	161	99	235	415	157	75	68	50	66
21	42	61	726	144	99	198	165	136	383	65	47	55
22	38	68	209	128	95	240	133	123	457	63	48	53
23	37	288	141	121	93	141	121	121	101	61	47	53
24	37	110	131	121	93	126	119	496	85	56	45	48
25	38	99	188	749	93	114	114	198	75	63	45	48
26	41	480	131	2850	97	827	112	141	77	61	48	47
27	79	110	108	502	95	1330	110	126	103	61	63	47
28	60	91	103	264	89	370	110	123	85	350	735	47
29	51	89	97	209	---	264	103	119	77	110	101	45
30	50	110	97	176	---	209	101	116	75	78	77	45
31	40	---	108	160	---	188	---	110	---	110	103	---
TOTAL	1654	5147	5889	9661	3025	8496	4357	6643	3626	4033	3010	1807
MEAN	53.4	172	190	312	108	274	145	214	121	130	97.1	60.2
MAX	219	1190	958	2850	150	1330	415	990	457	974	735	128
MIN	28	41	72	87	89	81	101	99	75	56	45	45
CFSM	.87	2.82	3.11	5.11	1.77	4.48	2.37	3.50	1.98	2.13	1.59	.99
IN.	1.01	3.13	3.59	5.88	1.84	5.17	2.65	4.04	2.21	2.46	1.83	1.10

CAL YR 1977 TOTAL 31108 MEAN 85.2 MAX 1190 MIN 20 CFSM 1.39 IN 18.94
WTR YR 1978 TOTAL 57348 MEAN 157 MAX 2850 MIN 28 CFSM 2.57 IN 34.92

01477000 CHESTER CREEK NEAR CHESTER, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

COOPERATION.--Water-quality data were furnished by the Pennsylvania Department of Environmental Resources.

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS (MG/L AS CACO3)
OCT											
03...	0930	9813	9813	34	360	7.5	14.5	7.9	--	--	94
NOV											
28...	1100	9813	9813	89	270	--	--	--	--	--	84
DEC											
15...	1400	9813	9813	172	230	--	--	--	--	--	64
JAN											
09...	1230	9813	9813	914	160	--	--	--	--	--	54
FEB											
16...	1000	9813	9813	116	370	--	--	--	--	2.8	92
MAR											
13...	1000	9813	9813	198	250	--	--	--	--	--	70
MAY											
23...	1400	9813	9813	119	240	--	--	--	--	1.5	90
JUN											
22...	1100	9813	9813	224	180	--	--	--	32	--	62
JUL											
18...	1332	9813	9813	75	280	--	--	--	8	--	75
AUG											
17...	1100	9813	9813	60	320	8.6	24.0	8.7	20	--	78
24...	1230	9813	9813	47	600	8.6	24.0	7.4	24	--	151
SEP											
28...	1000	9813	9813	50	410	7.6	13.5	9.7	36	--	102

DATE	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)
OCT										
03...	0	--	22	--	9.5	52	36	43	--	274
NOV										
28...	--	20	--	8.8	--	48	28	28	<.1	198
DEC										
15...	--	13	--	8.2	--	42	26	24	<.1	184
JAN										
09...	--	11	--	7.1	--	36	14	23	<.1	180
FEB										
16...	--	16	--	13	--	56	32	74	--	116
MAR										
13...	--	14	--	9.3	--	42	24	38	<.1	158
MAY										
23...	--	18	--	12	--	46	30	29	--	124
JUN										
22...	--	16	--	6.0	--	34	25	13	--	166
JUL										
18...	--	20	--	6.3	--	48	25	27	--	188
AUG										
17...	0	23	--	5.0	--	48	25	34	<10	210
24...	0	38	--	15	--	108	65	74	.2	418
SEP										
28...	0	24	--	5.5	--	54	50	25	--	248

01477000 CHESTER CREEK NEAR CHESTER, PA--Continued

WATER-QUALITY DATA, OCTOBER 1977 TO AUGUST 1978

DATE	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
OCT										
03...	16	--	6.3	.67	2.1	1.1	430	--	--	--
NOV										
28...	8	206	2.6	.08	.83	.30	610	--	<1	.07
DEC										
15...	38	222	2.6	.05	.61	.43	1925	--	--	--
JAN										
09...	460	648	2.0	.08	.41	.84	20200	--	--	<.02
FEB										
16...	14	130	3.3	.05	2.1	.43	480	--	--	--
MAR										
13...	52	210	3.0	.05	1.0	.35	3300	.00	5	.04
MAY										
23...	26	150	3.1	.15	.38	.05	730	--	--	--
JUN										
22...	162	328	2.4	.10	.05	.55	9810	--	--	--
JUL										
18...	8	196	3.5	.06	.08	.43	390	--	--	--
AUG										
17...	8	--	3.5	.09	.09	.59	250	--	--	--
24...	16	--	3.5	.03	.07	1.2	510	--	--	.07
SEP										
28...	6	--	7.0	.24	1.2	.76	260	--	--	--

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLF (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV									
28...	1100	280	1	10	<10	5	70	10	70
MAR									
13...	1000	2400	<3	<10	30	<50	160	<10	100
AUG									
17...	1100	--	<3	<10	10	<50	20	<10	20
24...	1230	--	<3	<10	20	<50	80	50	90

01477050 DELAWARE RIVER AT CHESTER, PA

LOCATION.--Lat 39°50'12", long 75°22'00", Delaware County, Hydrologic Unit 02040202, water-quality recorder located at auxiliary tidal-gaging station at end of Reynolds Aluminum Company pier, 0.5 mi (0.8 km) downstream from Chester Creek in Chester.

DRAINAGE AREA.--10,300 mi² (26,700 km²).

PERIOD OF RECORD.--December 1961 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: January 1968 to current year.
WATER TEMPERATURES: December 1961 to current year.
DISSOLVED OXYGEN: December 1961 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 5,900 micromhos Oct. 7, 1965; minimum, 111 micromhos Apr. 26, 27, 1972.
pH: Maximum, 8.7 Sept. 13, 14, 1971; minimum, 5.5 Dec. 10, 11, 1969.
WATER TEMPERATURES: Maximum, 33.0°C July 21, 1977; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 12.6 mg/L Feb. 2, 3, 1976; minimum, 0.0 mg/L on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
APR										
25...	0940	205	6.7	15.0	6.3	20	58	28	15	5.0
JUN										
05...	1130	207	6.4	25.0	3.5	35	90	58	18	11
JUL										
12...	1100	286	6.7	26.5	2.8	29	88	57	22	8.0
AUG										
16...	1135	319	7.3	28.5	.8	26	110	67	27	9.7
SEP										
26...	1155	473	6.6	23.0	2.0	16	89	56	11	15

DATE	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
APR										
25...	11	28	.6	2.0	37	0	30	12	34	16
JUN										
05...	65	60	3.0	4.0	39	0	32	25	48	100
JUL										
12...	20	32	.9	3.5	38	0	31	12	45	23
AUG										
16...	23	31	1.0	3.8	49	0	40	3.5	51	29
SEP										
26...	58	57	2.7	5.4	40	0	33	16	65	67

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
APR										
25...	116	.89	.03	.92	.79	.71	1.5	2.4	.36	.06
JUN										
05...	312	1.2	.05	1.2	.65	.95	.95	2.8	.21	.05
JUL										
12...	178	2.4	.00	2.4	.04	1.3	1.3	3.7	.25	.07
AUG										
16...	216	2.2	.00	2.2	.05	1.2	1.2	3.4	.24	.08
SEP										
26...	268	2.6	.03	2.6	.09	1.2	1.3	3.9	.14	.07

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR									
25...	--	--	--	--	--	--	--	--	7.2
JUN									
05...	--	--	--	--	--	--	--	--	1.4
JUL									
12...	1	0	10	60	9	.5	52	140	4.2
AUG									
16...	3	3	<10	210	83	<.5	92	110	6.0
SEP									
26...	--	--	--	--	--	--	--	--	6.4

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	297	263	281	---	---	---	222	207	213	224	197	208
2	276	246	259	---	---	---	229	208	219	229	203	213
3	260	229	241	---	---	---	232	219	225	234	208	218
4	242	219	228	---	---	---	244	216	224	218	212	---
5	235	218	224	---	---	---	229	213	218	246	214	223
6	242	219	225	---	---	---	237	205	215	240	218	228
7	221	207	216	---	---	---	224	195	209	252	218	229
8	224	207	214	---	---	---	221	195	203	242	222	232
9	222	205	213	---	---	---	212	194	201	249	214	232
10	236	198	209	---	---	---	218	181	198	255	227	241
11	284	204	231	---	---	---	218	183	198	233	211	224
12	243	214	223	---	---	---	207	186	194	215	175	198
13	226	210	217	---	---	---	220	186	196	232	163	175
14	232	210	216	---	---	---	236	189	200	245	163	198
15	230	209	215	207	198	203	224	198	208	256	167	200
16	224	208	213	208	193	198	234	201	219	230	179	200
17	224	206	214	219	186	195	236	223	231	238	183	199
18	222	210	217	218	181	191	228	224	---	249	223	235
19	226	213	217	208	180	189	211	189	203	---	---	---
20	225	190	203	202	182	191	217	196	208	---	---	---
21	210	181	189	214	186	196	210	176	197	---	---	---
22	197	173	183	225	189	200	215	185	195	---	---	---
23	198	163	170	218	193	201	208	184	192	---	---	---
24	169	155	160	206	193	199	212	178	193	---	---	---
25	179	149	156	207	193	200	212	188	196	---	---	---
26	174	148	154	209	193	203	210	185	197	---	---	---
27	186	149	158	224	201	215	221	190	200	220	192	203
28	172	151	157	238	214	224	212	192	201	213	187	199
29	---	---	---	234	218	224	215	194	203	205	181	191
30	---	---	---	246	216	220	220	199	206	209	171	184
31	---	---	---	---	---	---	218	201	209	209	165	180
MONTH	297	148	207	246	180	203	244	176	206	256	163	210

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	263	164	177	297	282	290	---	---	---	232	207	215
2	196	161	173	335	286	301	---	---	---	247	209	220
3	194	166	180	359	292	311	---	---	---	238	214	223
4	217	170	183	354	310	324	---	---	---	240	216	226
5	196	169	182	322	309	315	166	134	151	236	217	227
6	205	173	188	326	309	314	179	140	149	241	222	232
7	208	182	193	369	308	319	171	139	153	249	230	238
8	216	182	192	---	---	---	176	144	154	249	233	241
9	239	192	205	---	---	---	183	139	154	247	230	240
10	235	196	209	---	---	---	162	143	154	250	236	243
11	247	199	217	---	---	---	177	145	155	258	244	251
12	235	211	223	---	---	---	182	150	156	269	250	258
13	233	215	225	---	---	---	---	---	---	269	255	261
14	249	217	231	---	---	---	---	---	---	266	228	254
15	259	223	240	---	---	---	---	---	---	256	241	248
16	259	231	243	---	---	---	---	---	---	275	254	262
17	265	239	250	---	---	---	---	---	---	260	230	243
18	267	241	254	---	---	---	---	---	---	231	203	215
19	274	250	258	---	---	---	184	165	175	204	183	195
20	270	254	260	---	---	---	188	169	179	201	170	185
21	279	254	264	---	---	---	196	171	184	184	161	173
22	281	261	270	---	---	---	209	177	192	186	155	165
23	284	263	272	---	---	---	213	184	197	187	154	161
24	282	266	273	---	---	---	208	191	199	163	149	157
25	290	265	276	---	---	---	217	193	199	172	148	159
26	291	273	280	---	---	---	211	195	200	188	156	165
27	295	275	285	---	---	---	216	194	202	169	155	161
28	307	279	287	---	---	---	215	197	205	167	152	160
29	---	---	---	177	144	154	221	202	210	183	153	162
30	---	---	---	179	142	151	227	205	213	195	157	171
31	---	---	---	178	137	152	---	---	---	197	171	182
MONTH	307	161	232	369	137	263	227	134	179	275	148	209

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	220	179	189	298	277	284	---	---	---	334	320	327
2	219	182	195	290	278	285	---	---	---	335	320	327
3	211	185	200	291	258	280	---	---	---	331	316	325
4	217	191	205	284	239	265	---	---	---	330	317	324
5	218	195	208	292	269	280	---	---	---	333	319	325
6	228	202	214	299	287	289	---	---	---	334	317	326
7	228	207	218	301	285	292	---	---	---	337	319	328
8	229	213	222	299	286	291	---	---	---	357	322	336
9	247	220	231	296	282	289	---	---	---	350	323	333
10	244	227	235	296	280	286	---	---	---	384	320	338
11	248	228	238	327	282	287	---	---	---	365	325	345
12	253	231	242	291	280	286	---	---	---	359	328	343
13	253	235	246	294	284	288	---	---	---	381	327	344
14	266	241	252	296	285	290	---	---	---	428	331	369
15	264	248	256	296	286	290	---	---	---	461	340	375
16	267	251	258	298	284	291	---	---	---	414	342	373
17	271	252	260	302	286	292	---	---	---	447	351	389
18	273	256	265	306	288	296	---	---	---	503	364	415
19	276	257	266	304	289	297	---	---	---	489	376	422
20	275	259	268	314	294	303	---	---	---	541	378	443
21	333	257	272	323	301	310	---	---	---	496	371	423
22	297	253	272	328	315	321	346	314	330	442	375	400
23	283	269	276	---	---	---	362	313	331	478	370	408
24	289	271	279	---	---	---	350	313	331	459	378	413
25	290	273	281	---	---	---	397	316	337	435	375	403
26	292	276	283	---	---	---	394	323	347	491	375	414
27	291	280	285	---	---	---	407	323	350	546	388	429
28	296	274	283	---	---	---	379	290	330	489	392	434
29	286	276	281	---	---	---	333	294	315	539	398	438
30	287	276	282	---	---	---	333	316	326	577	394	463
31	---	---	---	---	---	---	335	322	329	---	---	---
MONTH	333	179	249	328	239	291	407	290	333	577	316	378

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.8	6.7	6.7	---	---	---	7.2	7.1	7.2	6.9	6.8	6.8
2	6.8	6.7	6.7	---	---	---	7.4	7.1	7.1	6.9	6.8	6.8
3	6.8	6.7	6.7	---	---	---	7.3	7.2	7.2	6.9	6.8	6.8
4	6.9	6.6	6.7	---	---	---	7.4	7.2	7.3	6.9	6.8	---
5	6.9	6.6	6.7	---	---	---	7.4	7.2	7.3	6.9	6.8	6.9
6	6.8	6.6	6.6	---	---	---	7.5	7.3	7.3	6.9	6.8	6.8
7	6.6	6.5	6.6	---	---	---	7.6	7.3	7.3	6.9	6.8	6.8
8	6.6	6.6	6.6	---	---	---	7.5	7.3	7.4	6.8	6.8	6.8
9	6.6	6.6	6.6	---	---	---	7.5	7.3	7.4	7.0	6.8	6.9
10	6.6	6.5	6.6	---	---	---	7.6	7.3	7.4	7.2	6.9	7.0
11	6.5	6.5	6.5	---	---	---	7.5	7.2	7.3	7.2	7.1	7.2
12	6.5	6.4	6.5	---	---	---	7.3	7.3	7.3	7.2	7.0	7.1
13	6.5	6.5	6.5	---	---	---	7.4	7.2	7.3	7.3	6.9	7.0
14	6.7	6.5	6.6	---	---	---	7.4	7.2	7.3	7.2	6.9	7.0
15	6.7	6.6	6.6	---	---	---	7.5	7.2	7.2	7.0	6.8	6.9
16	6.7	6.6	6.6	6.8	6.7	6.8	7.4	7.1	7.2	7.1	6.8	6.9
17	6.9	6.7	6.7	7.0	6.8	6.8	7.3	7.2	7.2	7.2	6.8	6.9
18	6.9	6.7	6.8	7.1	6.8	6.9	7.3	7.2	---	6.9	6.9	6.9
19	6.8	6.8	6.8	7.0	6.8	6.9	7.5	7.3	7.4	---	---	---
20	6.9	6.7	6.8	7.0	6.9	6.9	7.5	7.0	7.2	---	---	---
21	6.8	6.7	6.8	7.1	6.9	6.9	7.5	6.9	7.0	---	---	---
22	6.8	6.7	6.8	7.1	6.9	6.9	7.1	6.9	6.9	---	---	---
23	6.8	6.7	6.7	7.1	6.9	7.0	7.0	6.9	6.9	---	---	---
24	6.8	6.7	6.7	7.0	6.9	6.9	6.9	6.9	6.9	---	---	---
25	6.7	6.6	6.6	7.0	6.9	6.9	7.0	6.9	6.9	---	---	---
26	6.7	6.6	6.6	7.1	6.9	7.0	7.0	6.9	6.9	---	---	---
27	6.7	6.5	6.6	7.5	7.0	7.1	7.0	6.9	6.9	7.3	7.0	7.1
28	6.5	6.5	6.5	7.4	7.1	7.2	7.0	6.8	6.9	7.2	7.0	7.1
29	---	---	---	7.4	7.1	7.2	6.9	6.8	6.9	7.1	7.0	7.0
30	---	---	---	9.0	7.1	7.2	6.9	6.8	6.8	7.5	7.0	7.0
31	---	---	---	---	---	---	7.1	6.8	6.8	7.2	6.9	7.0
MONTH	6.9	6.4	6.7	9.0	6.7	7.0	7.6	6.8	7.1	7.5	6.8	6.9

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	9.1	6.9	7.0	6.6	6.6	6.6	---	---	---	6.7	6.6	6.7
2	6.9	6.8	6.8	6.7	6.6	6.6	---	---	---	6.8	6.6	6.7
3	6.9	6.8	6.8	6.7	6.6	6.6	---	---	---	6.8	6.6	6.7
4	7.0	6.8	6.8	6.8	6.6	6.6	---	---	---	6.8	6.6	6.7
5	6.9	6.7	6.8	6.7	6.6	6.6	6.9	6.7	6.8	6.8	6.7	6.7
6	7.2	6.7	6.8	6.7	6.6	6.6	6.9	6.8	6.8	6.7	6.7	6.7
7	7.0	6.8	6.8	6.7	6.6	6.6	6.9	6.8	6.8	6.7	6.6	6.7
8	7.0	6.8	6.8	---	---	---	6.9	6.8	6.8	6.7	6.6	6.6
9	6.9	6.8	6.8	---	---	---	6.9	6.7	6.8	6.7	6.6	6.6
10	6.9	6.8	6.8	---	---	---	6.8	6.7	6.7	6.7	6.6	6.6
11	7.0	6.8	6.8	---	---	---	6.9	6.7	6.7	6.7	6.5	6.6
12	6.9	6.7	6.8	---	---	---	6.8	6.5	6.7	6.7	6.6	6.6
13	6.8	6.7	6.7	---	---	---	---	---	---	6.8	6.6	6.6
14	6.9	6.7	6.7	---	---	---	---	---	---	6.8	6.7	6.7
15	6.9	6.7	6.7	---	---	---	---	---	---	6.8	6.7	6.7
16	6.7	6.7	6.7	---	---	---	---	---	---	7.0	6.8	6.8
17	6.7	6.7	6.7	---	---	---	---	---	---	6.8	6.8	6.8
18	6.7	6.6	6.7	---	---	---	---	---	---	6.8	6.7	6.8
19	6.7	6.6	6.7	---	---	---	6.7	6.6	6.7	6.8	6.7	6.7
20	6.8	6.6	6.6	---	---	---	6.8	6.7	6.7	6.8	6.7	6.7
21	6.7	6.6	6.6	---	---	---	6.7	6.7	6.7	6.8	6.7	6.7
22	6.9	6.6	6.7	---	---	---	6.7	6.6	6.7	6.8	6.6	6.7
23	6.8	6.6	6.7	---	---	---	6.7	6.6	6.6	6.8	6.6	6.6
24	6.7	6.6	6.6	---	---	---	6.7	6.6	6.6	6.7	6.6	6.6
25	6.7	6.6	6.6	---	---	---	6.7	6.6	6.6	6.7	6.5	6.6
26	6.7	6.6	6.6	---	---	---	6.7	6.6	6.6	6.8	6.5	6.6
27	6.7	6.6	6.6	---	---	---	6.8	6.7	6.7	6.6	6.5	6.6
28	6.8	6.5	6.6	---	---	---	6.7	6.7	6.7	6.6	6.5	6.5
29	---	---	---	6.9	6.9	6.9	6.8	6.7	6.7	6.7	6.5	6.5
30	---	---	---	7.2	6.8	6.9	6.8	6.7	6.7	6.6	6.4	6.5
31	---	---	---	7.0	6.8	6.8	---	---	---	6.6	6.5	6.5
MONTH	9.1	6.5	6.7	7.2	6.6	6.7	6.9	6.5	6.7	7.0	6.4	6.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.7	6.5	6.5	6.7	6.5	6.6	---	---	---	6.6	6.6	6.6
2	6.6	6.5	6.5	6.6	6.5	6.6	---	---	---	6.6	6.6	6.6
3	6.5	6.4	6.5	6.6	6.5	6.6	---	---	---	6.6	6.6	6.6
4	6.5	6.4	6.5	6.6	6.6	6.6	---	---	---	6.6	6.6	6.6
5	6.5	6.4	6.5	6.6	6.6	6.6	---	---	---	6.7	6.6	6.6
6	6.5	6.5	6.5	6.7	6.6	6.6	---	---	---	6.7	6.6	6.7
7	6.6	6.5	6.5	6.7	6.6	6.6	---	---	---	6.7	6.7	6.7
8	6.5	6.5	6.5	6.7	6.6	6.6	---	---	---	6.7	6.7	6.7
9	6.6	6.5	6.5	6.7	6.6	6.6	---	---	---	6.7	6.7	6.7
10	6.5	6.5	6.5	6.7	6.6	6.6	---	---	---	6.7	6.6	6.7
11	6.5	6.5	6.5	6.8	6.6	6.7	---	---	---	6.7	6.6	6.7
12	6.6	6.5	6.5	6.8	6.6	6.7	---	---	---	6.7	6.6	6.7
13	6.6	6.6	6.6	6.8	6.6	6.7	---	---	---	6.7	6.6	6.7
14	6.8	6.6	6.6	6.8	6.7	6.7	---	---	---	6.7	6.7	6.7
15	6.8	6.6	6.7	6.7	6.7	6.7	---	---	---	6.8	6.6	6.7
16	6.7	6.6	6.7	6.7	6.6	6.7	---	---	---	6.8	6.7	6.8
17	6.7	6.6	6.6	6.7	6.6	6.7	---	---	---	6.8	6.7	6.7
18	6.7	6.6	6.6	6.7	6.6	6.7	---	---	---	6.8	6.7	6.7
19	6.8	6.6	6.7	6.7	6.6	6.7	---	---	---	6.7	6.7	6.7
20	6.8	6.7	6.7	6.8	6.7	6.7	---	---	---	6.8	6.7	6.7
21	6.7	6.6	6.7	6.8	6.7	6.7	---	---	---	6.7	6.7	6.7
22	6.7	6.6	6.6	6.7	6.7	6.7	6.8	6.7	6.8	6.7	6.7	6.7
23	6.7	6.6	6.6	---	---	---	6.8	6.7	6.8	6.8	6.7	6.7
24	6.7	6.6	6.6	---	---	---	6.8	6.7	6.7	6.7	6.7	6.7
25	6.7	6.6	6.6	---	---	---	6.8	6.7	6.7	6.7	6.7	6.7
26	6.6	6.6	6.6	---	---	---	6.8	6.7	6.7	6.7	6.5	6.6
27	6.7	6.6	6.6	---	---	---	6.7	6.7	6.7	6.7	6.6	6.6
28	6.7	6.5	6.6	---	---	---	6.8	6.7	6.7	6.7	6.6	6.7
29	6.6	6.5	6.6	---	---	---	6.7	6.7	6.7	6.8	6.7	6.8
30	6.6	6.5	6.6	---	---	---	6.7	6.6	6.6	6.8	6.7	6.8
31	---	---	---	---	---	---	6.7	6.6	6.6	---	---	---
MONTH	6.8	6.4	6.6	6.8	6.5	6.7	6.8	6.6	6.7	6.8	6.5	6.7

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	21.5	22.0	---	---	---	8.0	7.5	8.0	3.5	3.0	3.0
2	22.0	21.0	21.5	---	---	---	8.0	7.0	7.5	3.0	2.5	3.0
3	20.5	19.5	20.5	---	---	---	7.5	7.0	7.0	3.0	2.0	2.5
4	19.5	18.5	19.0	---	---	---	7.0	6.0	6.5	2.5	2.5	---
5	19.5	18.5	19.0	---	---	---	7.0	6.0	6.5	3.0	2.0	2.5
6	18.5	18.0	18.5	---	---	---	6.5	6.0	6.5	3.5	2.5	3.0
7	18.5	17.5	18.0	---	---	---	6.0	4.5	5.5	3.5	3.0	3.0
8	18.0	17.0	17.5	---	---	---	6.0	4.0	5.0	4.5	3.0	3.5
9	18.0	17.5	17.5	---	---	---	5.5	4.0	5.0	5.5	2.5	4.5
10	17.5	16.5	17.0	---	---	---	4.0	2.5	3.5	3.5	1.5	2.5
11	17.5	16.5	17.0	---	---	---	3.5	2.5	3.0	3.5	1.5	2.5
12	17.5	16.5	17.0	---	---	---	3.5	2.5	3.0	3.5	2.0	2.5
13	17.0	14.0	16.5	---	---	---	3.5	3.0	3.0	3.0	1.5	2.0
14	16.5	15.0	15.5	---	---	---	4.5	3.0	3.5	2.0	1.0	1.5
15	16.0	14.5	15.0	11.5	11.5	11.5	5.0	4.0	4.5	1.5	.5	1.0
16	16.0	14.5	15.0	12.0	11.0	11.5	4.5	3.5	4.0	1.5	.0	1.0
17	14.5	13.0	14.0	12.0	11.0	11.5	4.0	3.5	3.5	1.5	.5	1.0
18	14.5	13.0	13.5	11.0	10.0	10.5	3.5	3.0	---	1.5	1.0	1.5
19	14.0	13.5	13.5	10.5	9.5	10.0	3.5	3.0	3.5	---	---	---
20	13.5	13.0	13.0	10.0	9.0	9.5	4.0	3.5	3.5	---	---	---
21	14.0	12.5	13.0	10.0	9.5	9.5	5.5	4.0	4.5	---	---	---
22	13.5	12.5	13.0	10.0	9.0	9.5	5.0	4.5	4.5	---	---	---
23	13.0	12.0	12.5	9.0	9.0	9.0	5.0	4.5	4.5	---	---	---
24	13.0	12.0	12.5	9.5	8.5	9.0	5.0	4.5	5.0	---	---	---
25	13.5	12.0	12.5	9.0	8.5	8.5	5.5	5.0	5.5	---	---	---
26	13.5	12.5	13.0	9.0	7.0	8.0	5.0	3.5	4.5	---	---	---
27	14.0	13.0	13.5	7.5	6.5	7.0	4.5	3.0	4.0	1.5	.0	1.0
28	14.0	13.0	13.5	8.0	6.5	7.0	4.0	3.0	3.0	2.0	.5	1.0
29	---	---	---	7.5	7.0	7.5	4.0	3.0	3.5	2.5	.5	1.0
30	---	---	---	8.0	7.0	7.5	4.0	3.0	3.5	2.5	.5	1.0
31	---	---	---	---	---	---	4.0	3.0	3.5	2.0	.5	1.0
MONTH	22.0	12.0	16.0	12.0	6.5	9.0	8.0	2.5	4.5	5.5	.0	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	.5	1.0	5.0	3.0	3.5	---	---	---	16.0	14.5	15.0
2	1.5	.5	1.0	5.0	3.0	4.0	---	---	---	16.5	14.5	15.5
3	2.5	.5	1.5	4.0	2.5	3.5	---	---	---	17.0	15.0	16.0
4	2.0	.5	1.0	4.0	2.5	3.5	---	---	---	16.0	15.0	15.5
5	1.0	.0	.5	4.0	2.0	3.0	12.0	10.5	11.5	15.5	14.5	15.0
6	1.0	.0	.5	4.5	2.5	3.5	11.0	10.5	11.0	15.0	14.5	15.0
7	1.5	.0	.5	5.0	2.5	4.0	12.0	10.5	11.0	16.0	14.5	15.5
8	1.5	.5	1.0	---	---	---	12.5	10.5	11.5	16.5	15.0	15.5
9	2.0	1.0	1.5	---	---	---	11.5	10.0	11.0	17.0	15.5	16.0
10	2.0	1.0	1.5	---	---	---	12.0	10.5	11.5	17.5	15.5	16.5
11	2.5	.5	1.5	---	---	---	12.5	11.5	11.5	17.5	16.0	17.0
12	2.0	1.0	1.5	---	---	---	13.0	11.0	12.0	19.0	16.5	17.5
13	1.5	.5	1.0	---	---	---	---	---	---	18.5	17.5	17.5
14	2.0	.5	1.0	---	---	---	---	---	---	18.5	17.0	17.5
15	3.0	.5	1.5	---	---	---	---	---	---	18.0	17.0	17.5
16	2.5	1.0	2.0	---	---	---	---	---	---	17.5	17.0	17.5
17	3.0	1.5	2.0	---	---	---	---	---	---	18.0	16.5	17.5
18	3.0	1.5	2.0	---	-	---	---	---	---	18.0	17.0	17.5
19	2.5	1.5	2.0	---		---	13.5	13.0	13.0	19.0	17.0	18.0
20	3.0	1.5	2.0	---	---	---	14.0	13.0	13.5	19.5	17.5	18.5
21	3.0	2.0	2.5	---	---	---	14.0	13.0	13.5	19.5	18.0	19.0
22	3.0	2.0	2.5	---	---	---	14.5	13.0	13.5	20.0	18.0	19.0
23	3.0	2.0	2.5	---	---	---	15.0	13.0	14.0	20.5	18.5	19.5
24	3.5	1.5	2.5	---	---	---	15.5	13.5	14.5	20.0	18.5	19.5
25	4.0	2.0	3.0	---	---	---	15.5	14.0	15.0	21.0	19.0	20.0
26	4.0	2.5	3.5	---	---	---	14.5	14.0	14.5	22.0	20.0	21.0
27	4.5	2.5	3.5	---	---	---	14.5	13.5	14.0	21.5	20.5	21.0
28	5.0	2.5	3.5	---	---	---	15.0	13.5	14.0	22.0	20.5	21.0
29	---	---	---	9.5	8.0	9.0	15.5	13.5	14.5	23.0	21.0	21.5
30	---	---	---	11.0	8.5	9.5	16.5	14.5	15.0	24.0	21.5	22.5
31	---	---	---	11.5	9.0	10.0	---	---	---	24.5	22.5	23.5
MONTH	5.0	.0	2.0	11.5	2.0	5.5	16.5	10.0	13.0	24.5	14.5	18.0

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.5	24.0	27.5	26.0	27.0	---	---	---	27.5	26.5	27.0
2	26.0	24.0	25.0	26.5	26.0	26.5	---	---	---	28.0	26.5	27.0
3	25.5	24.5	25.0	26.0	24.0	25.5	---	---	---	27.5	26.5	27.0
4	25.5	24.5	25.0	25.0	23.5	24.0	---	---	---	27.0	26.0	26.5
5	25.5	24.5	25.0	25.5	24.0	24.5	---	---	---	27.0	26.0	26.5
6	26.0	24.5	25.0	25.5	24.5	25.0	---	---	---	27.5	26.0	26.5
7	25.5	24.5	25.5	26.0	24.5	25.5	---	---	---	27.5	26.5	27.0
8	26.5	25.0	26.0	27.0	25.0	26.0	---	---	---	27.0	25.5	26.0
9	27.5	25.5	26.5	27.0	25.5	26.5	---	---	---	26.0	25.0	25.5
10	27.0	25.5	26.5	27.5	26.0	27.0	---	---	---	25.0	24.5	25.0
11	28.0	26.0	27.0	27.5	26.5	26.5	---	---	---	26.0	24.0	25.0
12	27.0	25.0	26.0	27.0	26.0	26.5	---	---	---	26.5	24.5	25.5
13	26.0	24.5	25.0	27.0	26.0	26.5	---	---	---	25.5	24.0	24.5
14	25.0	24.0	24.5	26.5	26.0	26.5	---	---	---	25.0	23.5	24.0
15	25.0	23.5	24.0	27.5	26.0	26.5	---	---	---	24.5	23.5	24.0
16	25.0	23.5	24.0	27.0	26.5	26.5	---	---	---	25.0	23.5	24.5
17	24.5	23.5	24.0	27.0	25.5	26.5	---	---	---	25.0	24.0	24.5
18	25.0	23.5	24.5	28.0	26.0	27.0	---	---	---	25.5	24.0	25.0
19	26.0	24.5	25.0	28.5	26.5	27.5	---	---	---	25.0	24.0	24.5
20	26.5	24.5	25.5	29.0	27.0	28.0	---	---	---	25.0	24.0	24.5
21	26.5	25.0	25.5	29.0	27.5	28.5	---	---	---	25.5	24.0	24.5
22	26.5	25.0	25.5	28.0	28.0	28.0	29.5	28.5	29.0	25.5	24.0	24.5
23	26.5	25.5	26.0	---	---	---	29.5	28.0	28.5	24.5	23.5	24.0
24	26.5	25.5	26.0	---	---	---	30.0	28.0	29.0	24.0	23.0	23.5
25	27.0	25.5	26.0	---	---	---	29.0	27.5	28.0	24.0	22.5	23.5
26	26.5	25.5	26.0	---	---	---	28.5	27.5	28.0	23.0	22.0	22.5
27	27.5	26.0	26.5	---	---	---	28.0	27.5	27.5	23.5	21.5	22.5
28	28.0	26.5	27.0	---	---	---	27.5	26.5	27.0	23.0	21.5	22.5
29	28.0	26.5	27.0	---	---	---	28.5	27.0	27.5	22.5	21.0	22.0
30	28.0	26.5	27.0	---	---	---	28.5	27.5	28.0	22.5	21.0	21.5
31	---	---	---	---	---	---	28.5	27.5	28.0	---	---	---
MONTH	28.0	23.5	25.5	29.0	23.5	26.5	30.0	26.5	28.0	28.0	21.0	24.5

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.8	2.0	2.4	---	---	---	8.5	7.9	8.1	10.4	10.1	10.3
2	3.0	2.3	2.6	---	---	---	8.3	7.9	8.1	10.3	10.1	10.2
3	3.5	2.5	3.0	---	---	---	8.5	8.2	8.3	10.3	9.8	10.1
4	4.2	3.2	3.7	---	---	---	8.8	8.4	8.5	10.8	10.4	---
5	4.3	3.8	4.0	---	---	---	9.1	8.6	8.8	11.0	10.5	10.7
6	3.9	3.6	3.8	---	---	---	9.1	8.9	9.0	10.9	10.4	10.6
7	3.7	3.2	3.5	---	---	---	9.8	9.1	9.4	10.8	10.5	10.6
8	3.7	3.1	3.4	---	---	---	9.8	9.3	9.5	10.8	10.5	10.7
9	4.2	3.3	3.6	---	---	---	9.7	9.4	9.5	11.0	10.7	10.9
10	3.9	3.0	3.5	---	---	---	10.0	9.5	9.8	11.7	11.0	11.3
11	3.3	2.9	3.1	---	---	---	10.0	9.6	9.7	12.0	11.7	11.9
12	3.2	2.8	3.0	---	---	---	9.7	9.5	9.6	12.1	11.8	11.9
13	3.3	2.8	3.0	---	---	---	9.7	9.4	9.5	12.2	11.8	12.0
14	4.3	3.1	3.6	---	---	---	9.5	9.2	9.3	12.3	11.9	12.1
15	5.0	4.1	4.5	6.9	6.6	6.7	9.3	8.9	9.1	12.4	12.1	12.2
16	4.8	4.3	4.5	7.1	6.6	6.8	9.1	8.8	8.9	12.4	12.1	12.2
17	6.1	4.7	5.3	7.2	6.9	7.0	9.1	8.7	8.9	12.3	12.1	12.2
18	6.4	5.5	5.9	7.6	7.1	7.4	9.3	9.1	---	12.4	12.3	12.4
19	6.0	5.5	5.8	7.9	7.5	7.6	10.4	10.0	10.2	---	---	---
20	6.0	5.4	5.7	7.6	7.3	7.5	11.0	10.2	10.6	---	---	---
21	6.2	5.8	5.9	7.4	7.1	7.2	10.9	10.5	10.7	---	---	---
22	6.4	6.0	6.2	7.3	6.9	7.0	10.8	10.6	10.7	---	---	---
23	6.6	6.2	6.4	7.4	6.9	7.1	10.7	10.4	10.6	---	---	---
24	6.6	6.3	6.4	7.5	6.8	7.0	10.6	10.3	10.4	---	---	---
25	6.5	6.1	6.3	6.9	6.8	6.8	10.4	10.1	10.3	---	---	---
26	6.4	6.0	6.2	7.8	6.8	7.2	10.5	10.1	10.2	---	---	---
27	6.1	5.8	6.0	8.4	7.4	8.0	10.6	10.1	10.3	12.4	11.9	12.3
28	5.9	5.6	5.8	8.5	7.8	8.1	10.7	10.1	10.4	12.6	12.2	12.4
29	---	---	---	8.3	7.9	8.0	10.9	10.4	10.7	12.5	12.2	12.3
30	---	---	---	8.2	7.9	8.0	10.8	10.6	10.7	12.5	12.3	12.4
31	---	---	---	---	---	---	10.8	10.3	10.5	12.4	12.2	12.3
MONTH	6.6	2.0	4.5	8.5	6.6	7.3	11.0	7.9	9.7	12.6	9.8	11.6

01477050 DELAWARE RIVER AT CHESTER, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.3	12.1	12.2	7.7	7.3	7.5	---	---	---	6.7	5.9	6.1
2	12.2	11.8	12.0	8.0	7.3	7.4	---	---	---	6.7	5.7	6.0
3	11.9	11.6	11.8	8.0	7.1	7.4	---	---	---	6.1	5.6	5.8
4	11.9	11.5	11.7	8.5	7.3	7.6	---	---	---	6.4	5.5	5.9
5	11.6	11.3	11.5	8.6	7.5	7.9	9.5	9.3	9.4	6.4	6.0	6.2
6	11.5	11.2	11.4	8.7	7.7	8.0	9.4	8.9	9.1	6.1	5.4	5.7
7	11.7	11.3	11.5	8.5	7.8	8.1	9.0	8.7	8.8	5.9	5.0	5.3
8	11.7	11.4	11.5	---	---	---	9.0	8.6	8.8	5.5	4.8	5.0
9	11.5	11.1	11.3	---	---	---	9.0	8.7	8.8	5.8	5.0	5.3
10	11.3	11.0	11.1	---	---	---	8.9	8.6	8.7	5.2	4.5	4.8
11	11.1	10.8	10.9	---	---	---	8.8	8.6	8.6	5.2	4.3	4.5
12	11.1	10.7	10.8	---	---	---	8.7	7.8	8.5	4.7	4.1	4.3
13	10.8	10.5	10.6	---	---	---	---	---	---	5.6	4.1	4.6
14	10.8	10.3	10.5	---	---	---	---	---	---	5.9	4.9	5.4
15	10.6	10.1	10.3	---	---	---	---	---	---	6.0	5.2	5.5
16	10.3	10.0	10.1	---	---	---	---	---	---	6.4	5.9	6.1
17	10.2	9.8	9.9	---	---	---	---	---	---	6.2	5.7	6.0
18	9.8	9.5	9.7	---	---	---	---	---	---	6.3	5.8	6.0
19	9.9	9.3	9.5	---	---	---	8.0	7.7	7.9	6.4	5.8	6.0
20	9.4	9.1	9.2	---	---	---	7.9	7.4	7.6	6.5	6.0	6.3
21	9.3	8.9	9.1	---	---	---	7.7	7.1	7.4	6.8	6.1	6.5
22	9.6	8.8	9.0	---	---	---	7.3	6.9	7.1	6.7	6.4	6.5
23	9.6	8.7	9.0	---	---	---	7.0	6.5	6.7	6.6	6.1	6.3
24	9.0	8.6	8.8	---	---	---	6.7	6.3	6.4	6.5	5.8	6.2
25	9.1	8.0	8.5	---	---	---	7.0	6.0	6.3	6.1	5.4	5.8
26	8.5	7.8	8.2	---	---	---	7.1	6.0	6.4	5.7	5.2	5.4
27	8.5	7.6	7.9	---	---	---	7.4	6.6	6.9	5.4	5.0	5.1
28	8.5	7.4	7.7	---	---	---	7.2	6.7	6.8	5.1	4.6	4.8
29	---	---	---	10.4	10.0	10.2	6.9	6.5	6.6	4.9	4.4	4.6
30	---	---	---	10.2	9.7	9.9	6.6	6.1	6.3	4.9	4.1	4.4
31	---	---	---	9.8	9.4	9.6	---	---	---	4.6	4.1	4.3
MONTH	13.3	7.4	10.2	10.4	7.1	8.4	9.5	6.0	7.7	6.8	4.1	5.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.5	3.8	4.2	3.9	2.7	3.1	---	---	---	1.6	.8	1.1
2	4.2	3.5	3.8	3.3	2.6	2.9	---	---	---	1.6	.8	1.1
3	3.9	3.3	3.5	4.5	2.5	3.4	---	---	---	1.6	.7	1.1
4	3.6	3.2	3.3	4.6	3.6	4.1	---	---	---	1.9	.6	1.1
5	3.9	3.2	3.4	4.2	3.5	3.9	---	---	---	2.2	.7	1.5
6	3.5	3.1	3.3	4.2	3.5	3.8	---	---	---	2.1	.9	1.5
7	3.4	2.9	3.2	4.3	3.5	3.9	---	---	---	2.5	1.3	1.8
8	3.6	3.0	3.2	5.0	3.7	4.0	---	---	---	2.1	1.1	1.5
9	3.3	2.9	3.1	4.3	3.7	3.9	---	---	---	2.3	1.1	1.5
10	3.4	2.7	3.0	4.0	3.3	3.6	---	---	---	2.5	1.4	1.9
11	3.2	2.6	2.9	---	---	---	---	---	---	3.1	1.9	2.3
12	3.9	2.8	3.3	3.0	1.6	2.1	---	---	---	2.9	2.0	2.4
13	3.7	3.2	3.4	3.4	1.3	2.2	---	---	---	3.0	1.8	2.3
14	4.9	3.2	4.0	2.7	1.5	2.1	---	---	---	2.9	2.0	2.5
15	5.3	3.9	4.6	2.5	1.2	1.7	---	---	---	3.0	1.8	2.3
16	5.7	4.0	5.0	1.5	.8	1.2	---	---	---	2.5	1.5	2.0
17	5.3	4.1	4.6	1.4	.5	.8	---	---	---	2.3	1.1	1.7
18	5.8	3.7	4.7	1.4	.5	.8	---	---	---	2.1	.9	1.4
19	5.6	3.8	4.7	1.7	.4	.9	---	---	---	1.9	.9	1.3
20	5.8	4.0	4.8	1.9	.7	1.1	---	---	---	1.8	.7	1.3
21	4.7	4.0	4.3	1.8	.1	1.1	---	---	---	1.7	.9	1.3
22	4.0	3.6	3.8	1.0	.4	.8	1.9	1.6	1.7	1.5	.8	1.1
23	3.8	3.1	3.3	---	---	---	2.0	1.3	1.6	2.3	1.0	1.6
24	4.1	2.9	3.3	---	---	---	2.0	1.3	1.5	2.3	1.7	1.9
25	4.3	2.8	3.4	---	---	---	1.9	1.3	1.5	2.4	1.6	1.9
26	4.1	2.9	3.4	---	---	---	2.1	1.4	1.7	2.7	1.6	2.0
27	3.7	2.8	3.2	---	---	---	1.7	1.4	1.5	2.8	1.8	2.1
28	3.9	2.8	3.1	---	---	---	2.8	1.4	2.1	2.5	1.7	2.0
29	3.5	2.6	2.9	---	---	---	2.2	1.4	1.8	2.4	1.6	2.0
30	3.6	2.6	2.9	---	---	---	1.7	1.1	1.3	2.5	1.7	2.1
31	---	---	---	---	---	---	1.5	1.0	1.1	---	---	---
MONTH	5.8	2.6	3.7	5.0	.1	2.5	2.8	1.0	1.6	3.1	.6	1.7

01480300 WEST BRANCH BRANDYWINE CREEK NEAR HONEY BROOK, PA

LOCATION.--Lat 40°04'22", long 75°51'40", Chester County, Hydrologic Unit 02040205, at right upstream end of bridge on Legislative Route 15185, at Birdell, 0.4 mi (0.6 km) downstream from Two Log Run, and 3.0 mi (4.8 km) southeast of Honey Brook.

DRAINAGE AREA.--18.7 mi² (48.4 km²).

PERIOD OF RECORD.--June 1960 to current year.

REVISED RECORDS.--WDR PA-73: 1972(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 591.20 ft (180.198 m) National Geodetic Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--18 years, 25.2 ft³/s (0.714 m³/s), 18.30 in/yr (465 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,140 ft³/s (231 m³/s) June 22, 1972, gage height, 11.41 ft (3.478 m), from rating curve extended above 1,900 ft³/s (53.8 m³/s) on basis of slope-area measurement of peak flow; minimum, 1.7 ft³/s (0.048 m³/s) Aug. 15, 16, 17, 18, 19, 1963; minimum gage height, 1.07 ft (0.326 m) Feb. 21, 22, 1977, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14.2 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 18	----	740	21.0	6.50	1.981	Mar. 26	----	719	20.4	6.43	1.960
Jan. 9	----	656	18.6	6.22	1.896	Mar. 27	----	620	17.6	6.10	1.860
Jan. 26	0900	*3,860	109	*9.98	3.042	May 14	----	842	23.8	6.84	2.085
Mar. 14	----	806	22.8	6.72	2.048	June 27	----	629	17.8	6.13	1.868
Mar. 15	----	740	21.0	6.50	1.981	July 3	Unknown	Unknown		Unknown	
Mar. 19	2000	542	15.3	5.84	1.780	Aug. 28	----	864	24.5	6.91	2.106

Minimum discharge, 7.0 ft³/s (0.20 m³/s) Mar. 5, gage height, 1.15 ft (0.350 m), result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	130	22	27	20	32	19	21	18	29	113
2	14	12	35	22	27	20	28	19	20	18	20	24
3	12	18	25	19	25	20	28	19	26	200	18	20
4	11	24	23	20	25	20	33	19	36	100	16	18
5	11	16	25	20	23	21	43	26	25	32	18	15
6	11	15	45	21	21	21	32	24	24	26	17	15
7	11	149	25	23	23	21	43	22	21	24	17	15
8	11	120	20	51	28	18	30	22	26	23	14	15
9	48	32	22	331	26	18	25	73	24	23	13	15
10	22	32	19	38	25	19	25	43	20	22	13	13
11	14	83	18	30	24	24	25	26	19	22	13	13
12	13	27	17	25	24	37	31	23	18	19	14	13
13	12	23	20	27	24	80	25	23	21	19	30	15
14	32	21	40	97	26	274	22	327	18	19	14	12
15	95	20	60	38	24	495	22	146	17	24	13	15
16	26	19	27	29	28	95	21	96	16	20	12	14
17	51	37	26	30	25	44	23	75	18	20	11	13
18	22	36	349	164	24	38	23	76	18	19	10	12
19	20	21	209	56	23	162	33	70	18	17	10	76
20	18	19	59	42	23	130	61	38	16	16	9.8	21
21	15	19	257	50	23	122	32	32	22	16	9.4	17
22	14	20	56	39	25	104	26	29	32	15	9.4	17
23	14	70	38	30	20	51	23	28	18	15	8.6	15
24	13	30	36	27	21	49	23	55	17	14	8.6	14
25	13	25	78	171	22	33	23	36	16	24	9.0	13
26	15	110	27	1390	22	282	22	27	16	18	9.0	12
27	18	30	23	230	21	390	22	25	187	16	44	12
28	15	25	20	51	21	79	21	25	26	24	288	12
29	13	24	20	38	---	45	20	24	21	15	24	11
30	12	30	20	33	---	36	20	22	20	15	17	11
31	12	---	23	30	---	33	---	22	---	29	46	---
TOTAL	620	1119	1792	3194	678	2801	837	1511	797	882	784.8	601
MEAN	20.0	37.3	57.8	103	23.9	90.4	27.9	48.7	26.6	28.5	25.3	20.0
MAX	95	149	349	1390	28	495	61	327	187	200	288	113
MIN	11	12	17	19	20	18	20	19	16	14	8.6	11
CFSM	1.07	2.00	3.09	5.51	1.28	4.83	1.49	2.60	1.42	1.52	1.35	1.07
IN.	1.23	2.23	3.56	6.35	1.33	5.57	1.66	3.01	1.59	1.75	1.56	1.20

CAL YR 1977 TOTAL 9850.3 MEAN 27.0 MAX 353 MIN 5.0 CFSM 1.44 IN 19.59
WTR YR 1978 TOTAL 15608.8 MEAN 42.8 MAX 1390 MIN 8.6 CFSM 2.29 IN 31.05

01480500 WEST BRANCH BRANDYWINE CREEK AT COATESVILLE,PA

LOCATION.--Lat 39°59'08", long 75°49'40", Chester County, Hydrologic Unit 02040205, on right bank at city limits of Coatesville, 1,200 ft (366 m) upstream from bridge on old Lincoln Highway, and 0.6 mi (1.0 km) downstream from Rock Run.

DRAINAGE AREA.--45.8 mi² (118.6 km²).

PERIOD OF PERIOD.--October 1943 to December 1951, January 1970 to current year.

GAGE.--Water-stage recorder and V-notch sharp crested weir. Altitude of gage is 305 ft (93.0 m) from topographic map. Sept. 10, 1943 to Dec. 31, 1951, nonrecording gage at site 1,100 ft (335 m) downstream at different datum.

REMARKS.--Records good except those for winter periods, which are fair. Diversion above station from Rock Run Reservoir, capacity, 320 mil gal (1.211 hm³) 2.6 mi (4.2 km) upstream, for municipal supply of city of Coatesville.

AVERAGE DISCHARGE.--16 years (1943-51, 1970-78), 73.5 ft³/s (2.08 m³/s), 21.79 in/yr (553 mm/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s (229 m³/s) June 29, 1973, gage height, 10.08 ft (3.072 m), from rating curve extended above 2,200 ft³/s (62.3 m³/s) on basis of slope-area measurement at gage height 9.92 ft (3.024 m); minimum observed, 4.6 ft³/s (0.13 m³/s) Sept. 10, 1944, gage height, 0.70 ft (0.213 m), site and datum then in use; minimum daily, 9.6 ft³/s (0.27 m³/s) Sept. 12, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 9, 1942 reached a stage of 12.3 ft (3.75 m), site and datum then in use, discharge, 8,600 ft³/s (244 m³/s), by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 18	1500	1,500	42.5	6.40	1.951	Mar. 26	2045	1,240	35.1	6.17	1.881
Jan. 9	0500	1,070	30.3	5.99	1.826	May 14	1200	999	28.3	5.91	1.801
Jan. 26	1345	*3,980	113	*8.00	2.438	June 27	0345	1,930	54.7	6.72	2.048
Mar. 14	2345	1,660	47.0	6.52	1,987	July 3	1530	1,310	37.1	6.24	1.902
Mar. 15	1600	774	21.9	5.62	1.713	Aug. 28	0530	1,260	35.7	6.19	1.887

Minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 5, 6; minimum gage height, 3.64 ft (1.109 m) Oct. 5, 6, Sept. 27; minimum daily, 16 ft³/s (0.45 m³/s) Oct. 5, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	292	67	92	57	104	49	55	38	55	155
2	27	23	91	67	89	55	90	47	53	38	50	52
3	22	32	63	59	84	57	89	47	71	455	43	43
4	18	46	56	57	78	55	102	49	94	314	38	36
5	16	35	63	61	75	52	124	63	62	89	47	30
6	17	32	103	62	67	54	94	59	59	62	46	28
7	18	239	58	67	78	52	115	54	55	55	40	28
8	16	243	47	122	86	52	89	52	63	52	34	40
9	72	71	51	641	78	52	77	134	59	52	29	30
10	54	55	46	116	78	54	74	125	50	49	28	25
11	31	135	43	86	75	59	73	64	47	47	31	30
12	26	55	42	78	70	89	82	56	45	45	32	27
13	21	46	45	84	67	165	70	57	57	43	46	25
14	35	43	93	226	72	584	63	506	47	43	31	26
15	135	43	147	107	64	795	61	296	40	52	27	27
16	49	42	66	81	62	314	59	214	38	47	26	35
17	81	53	56	86	64	152	60	169	40	47	26	25
18	47	79	665	290	62	129	58	163	45	43	24	25
19	37	46	463	152	62	242	94	144	40	38	23	120
20	36	42	165	107	61	306	151	99	36	34	23	45
21	31	42	405	104	61	270	85	82	54	34	22	31
22	28	45	183	95	57	270	67	73	78	32	22	34
23	26	146	116	86	59	169	60	70	45	32	21	30
24	24	73	101	86	59	148	58	111	38	28	21	27
25	26	57	183	323	61	116	57	99	36	49	21	26
26	30	252	104	2120	62	479	56	73	36	46	22	25
27	41	69	72	377	59	761	55	67	536	45	75	23
28	35	55	64	176	57	216	54	64	72	55	475	24
29	31	54	62	132	---	143	51	63	49	40	64	23
30	25	68	64	116	---	119	50	60	45	34	40	23
31	23	---	70	98	---	108	---	58	---	47	49	---
TOTAL	1101	2244	4079	6329	1939	6174	2322	3267	2045	2085	1531	1118
MEAN	35.5	74.8	132	204	69.3	199	77.4	105	68.2	67.3	49.4	37.3
MAX	135	252	665	2120	92	795	151	506	536	455	475	155
MIN	16	23	42	57	57	52	50	47	36	28	21	23
ƒ	3.72	3.07	4.10	5.25	4.42	3.64	4.80	5.21	4.57	4.32	4.42	4.45
MEANƒ	39.2	77.9	136	209	73.7	203	82.2	110	72.8	71.6	53.8	41.8
CFSMƒ	.86	1.70	2.97	4.56	1.61	4.43	1.79	2.40	1.59	1.56	1.17	.91
IN.ƒ	.99	1.90	3.42	5.26	1.68	5.11	2.00	2.77	1.77	1.80	1.35	1.02

CAL YR 1977 TOTAL 20400 MEAN 55.9 MAX 760 MIN 11 MEANƒ 60.3 CFSMƒ 1.32 IN.ƒ 17.87
WTR YR 1978 TOTAL 34234 MEAN 93.8 MAX 2120 MIN 16 MEANƒ 98.2 CFSMƒ 2.14 IN.ƒ 29.07

ƒ Diversion for municipal supply and change in contents in Rock Run Reservoir, equivalent in cubic feet per second, furnished by City of Coatesville.

ƒ Adjusted for diversion and change of contents in Rock Run Reservoir.

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA

LOCATION.--Lat 39°57'42", long 75°48'06", Chester County, Hydrologic Unit 02040205, on left bank at bridge on Legislative Route 15068 at Modena and 300 ft (91 m) upstream from Dennis Run.

DRAINAGE AREA.--55.0 mi^2 (142.4 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1970 to current year.

REVISED RECORDS.--WDR PA-74: 1971-72(P), 1973. WDR PA-75-1: 1974(m).

GAGE.--Water-stage recorder. Altitude of gage is 265 ft (80.8 m), from topographic map.

REMARKS.--Records fair. Flow regulated by Rock Run Reservoir, capacity, 320 mil gal (1.211 hm^3) 5.6 mi (9.0 km) upstream and by Lukens Steel Company.

AVERAGE DISCHARGE.--8 years, 103 ft^3/s (2.92 m^3/s), 25.43 in/yr (646 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,600 ft^3/s (272 m^3/s) June 29, 1973, gage height, 12.47 ft (3.801 m), from rating curve extended above 920 ft^3/s (26.1 m^3/s) on basis of slope-area measurement at gage height 11.48 ft (3.499 m); minimum, 1.8 ft^3/s (0.051 m^3/s) Aug. 29, 1974; minimum gage height, 2.27 ft (0.692 m) Oct. 14, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft^3/s (23.8 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 18	1445	2,360	66.8	6.98	2.128	May 14	1300	1,080	30.6	5.36	1.634
Jan. 9	0500	1,370	38.8	5.78	1.762	June 27	0300	3,390	96.0	7.99	2.435
Jan. 26	1400	*4,890	138	*9.28	2.829	July 3	1615	2,040	57.8	6.62	2.018
Mar. 15	0030	1,810	51.2	6.36	1.939	Aug. 28	0930	1,410	39.9	5.84	1.780
Mar. 26	Unknown	Unknown		Unknown							

Minimum discharge, 12 ft^3/s (0.34 m^3/s) Aug. 20, gage height, 2.47 ft (0.753 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	38	324	109	130	78	136	74	86	57	70	155
2	41	44	118	109	125	78	122	70	78	58	66	72
3	38	55	90	103	120	82	116	70	90	590	57	60
4	33	72	84	93	118	80	129	70	124	354	54	58
5	30	49	90	95	109	72	152	93	90	120	64	46
6	34	64	129	101	107	78	122	86	88	90	60	27
7	34	307	84	103	103	68	138	78	84	82	55	49
8	30	266	66	109	105	76	118	76	88	74	50	53
9	118	99	74	788	111	74	103	150	86	74	47	52
10	84	88	57	378	107	74	103	155	72	68	45	38
11	46	158	60	174	101	84	101	88	70	70	48	44
12	41	80	55	116	103	103	105	80	66	60	50	44
13	35	68	62	107	101	158	99	76	82	62	70	35
14	64	58	129	196	103	625	93	491	66	58	55	38
15	171	58	182	150	93	884	88	378	58	72	50	40
16	90	57	93	109	88	500	84	260	57	66	46	47
17	120	78	82	105	93	343	86	210	60	64	44	44
18	76	103	908	230	90	276	84	198	62	60	40	44
19	57	64	576	190	88	260	111	182	58	57	40	142
20	57	55	204	114	74	339	166	138	53	53	38	62
21	43	57	455	118	78	253	114	116	103	53	35	34
22	46	60	240	122	76	273	97	103	105	52	40	47
23	43	174	163	107	78	220	86	101	66	50	33	43
24	40	101	152	99	84	200	86	120	57	49	38	40
25	43	82	185	374	86	180	84	133	57	68	35	43
26	44	280	163	2810	90	600	82	103	55	60	34	43
27	58	99	120	558	86	900	82	95	724	70	84	35
28	49	80	111	200	80	276	76	90	101	80	549	38
29	49	76	103	170	---	204	74	90	70	55	107	38
30	41	97	107	150	---	163	72	86	64	52	57	34
31	44	---	111	140	---	140	---	84	---	64	74	---
TOTAL	1736	2967	5377	8327	2727	7741	3109	4144	2920	2842	2135	1545
MEAN	56.0	98.9	173	269	97.4	250	104	134	97.3	91.7	68.9	51.5
MAX	171	307	908	2810	130	900	166	491	724	590	549	155
MIN	30	38	55	93	74	68	72	70	53	49	33	27
(≠)	+.76	-1.17	-1.15	+1.25	+.39	-1.00	-.58	+.78	+.11	-.10	+.11	-.03
MEAN≠	56.8	97.7	172	270	97.8	249	103	135	97.4	91.6	69.0	51.5
CFSM≠	1.03	1.78	3.13	4.91	1.78	4.53	1.87	2.45	1.77	1.66	1.25	.94
IN.≠	1.19	1.99	3.61	5.66	1.85	5.22	2.09	2.82	1.97	1.91	1.44	1.05

CAL YR 1977 TOTAL 29004 MEAN 79.5 MAX 908 MIN 26 MEAN≠ 79.5 CFSM≠ 1.44 IN≠ 19.61
WTR YR 1978 TOTAL 45570 MEAN 125 MAX 2810 MIN 27 MEAN≠ 125 CFSM≠ 2.27 IN≠ 30.80

≠ Change in contents in Rock Run Reservoir, equivalent in cubic feet per second, furnished by City of Coatesville.
≠ Adjusted for change in contents in Rock Run Reservoir.

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1971 to October 1978 (discontinued).
pH: May 1971 to October 1978 (discontinued)
WATER TEMPERATURES: May 1971 to October 1978 (discontinued).
DISSOLVED OXYGEN: May 1971 to October 1978 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 858 micromhos Jan. 10, 1977; minimum, 88 micromhos Nov. 30, 1976.
pH: Maximum, 10.0 Dec. 21, 1971; minimum, 6.3 April 3, 1975.
WATER TEMPERATURES: Maximum 33.5°C July 19, 1977; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 16.3 mg/L Dec. 30, 1976; minimum, 0.6 mg/L Nov. 1, 3, 1974.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	341	284	304									
2	305	273	281									
3	299	269	283									
4	337	290	304									
5	319	287	304									
6	351	292	315									
7	356	300	321									
8	344	292	308									
9	368	182	238									
10	260	182	228									
11	300	254	274									
12	320	274	291									
13	323	274	297									
14	319	195	273									
15	217	170	196									
16	240	142	221									
17	226	193	208									
18	260	216	243									
19	278	252	263									
20	284	252	268									
21	283	261	276									
22	305	272	284									
23	312	274	289									
24	295	273	282									
25	287	273	281									
26	286	229	271									
27	296	246	265									
28	303	258	276									
29	327	261	286									
30	303	271	281									
31	292	274	279									
MONTH	368	142	274									

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.4	7.9	8.7									
2	10.7	8.2	9.5									
3	11.2	8.9	9.9									
4	10.9	7.3	9.2									
5	9.6	7.0	8.1									
6	8.9	7.1	7.8									
7	9.6	7.4	8.3									
8	9.8	7.1	8.4									
9	9.5	8.0	8.7									
10	10.5	8.6	9.7									
11	10.4	8.1	9.2									
12	9.8	8.0	8.7									
13	9.8	7.6	8.5									
14	9.9	7.6	8.8									
15	10.7	10.0	10.3									
16	10.5	9.0	9.8									
17	10.8	9.4	10.3									
18	11.1	8.5	10.0									
19	10.1	8.3	9.0									
20	10.3	8.8	9.5									
21	10.3	8.5	9.3									
22	10.3	8.4	9.2									
23	10.6	8.3	9.5									
24	10.5	8.7	9.5									
25	10.5	8.3	9.2									
26	9.1	8.0	8.5									
27	9.1	7.5	8.3									
28	9.3	7.4	8.2									
29	9.6	7.7	8.5									
30	10.5	8.0	9.3									
31	10.1	9.0	9.2									
MONTH	11.2	7.0	9.1									

TEMPERATURE ($^{\circ}$C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	19.5	20.5									
2	22.5	19.5	20.5									
3	20.0	17.5	18.5									
4	20.5	16.0	18.0									
5	21.0	16.5	18.5									
6	20.0	18.0	18.5									
7	19.5	15.5	17.5									
8	17.0	15.5	16.5									
9	17.5	15.0	16.5									
10	16.5	14.0	15.5									
11	18.0	14.5	16.0									
12	18.5	15.5	16.5									
13	17.5	15.5	16.0									
14	16.5	13.0	15.0									
15	14.0	11.5	12.5									
16	15.5	12.5	14.0									
17	14.0	11.0	12.0									
18	14.0	10.5	12.5									
19	16.0	13.0	14.0									
20	16.0	13.0	14.5									
21	17.5	13.5	15.0									
22	18.0	13.5	15.5									
23	16.5	13.5	14.5									
24	16.5	13.5	14.5									
25	17.0	13.5	15.0									
26	16.5	15.0	16.0									
27	19.0	16.5	18.0									
28	20.5	18.0	19.0									
29	19.0	15.0	17.0									
30	16.5	13.5	14.5									
31	14.0	12.5	13.0									
MONTH	22.5	10.5	16.0									

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.5	7.2	7.3									
2	7.9	7.2	7.5									
3	7.9	7.4	7.6									
4	8.0	7.3	7.6									
5	7.9	7.3	7.6									
6	7.7	7.3	7.5									
7	8.0	7.3	7.5									
8	7.8	7.3	7.5									
9	7.8	7.3	7.4									
10	8.1	7.4	7.7									
11	8.1	7.4	7.6									
12	8.0	7.3	7.6									
13	8.0	7.4	7.6									
14	8.0	7.3	7.5									
15	7.6	7.4	7.5									
16	8.0	7.4	7.6									
17	8.0	7.4	7.5									
18	7.8	7.4	7.6									
19	7.7	7.4	7.5									
20	7.8	7.4	7.5									
21	7.9	7.3	7.5									
22	7.9	7.3	7.5									
23	8.0	7.3	7.6									
24	8.0	7.4	7.6									
25	8.0	7.3	7.5									
26	7.6	7.3	7.3									
27	7.7	7.2	7.4									
28	7.8	7.2	7.4									
29	7.8	7.2	7.4									
30	7.9	7.3	7.5									
31	7.5	7.3	7.4									
MONTH	8.1	7.2	7.5									

01480675 MARSH CREEK NEAR GLENMOORE, PA

LOCATION.--Lat 40°05'52", long 75°44'31", Chester County, Hydrologic Unit 02040205, on left bank 200 ft (60 m) north of Pennsylvania Turnpike, 1.2 mi (1.9 km) downstream from Lyons Run, 1.8 mi (2.9 km) upstream from Black Horse Creek, and 3 mi (5 km) northeast of Glenmoore.

DRAINAGE AREA.--8.57 mi^2 (22.20 km^2).

PERIOD OF RECORD.--July 1966 to current year.

REVISED RECORDS.--WDR PA-74: 1967(M), 1971-72(P).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 450 ft (137 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--12 years, 13.0 ft^3/s (0.368 m^3/s), 20.60 in/yr (523 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 946 ft^3/s (26.8 m^3/s) June 22, 1972, gage height, 4.08 ft (1.426 m); minimum, 0.3 ft^3/s (0.008 m^3/s) Aug. 31, 1966, gage height, 0.98 ft (0.299 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft^3/s (3.68 m^3/s) and maximum(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 8	0245	139	3.94	2.38	0.725	Mar. 15	0430	148	4.19	2.41	0.735
Dec. 19	0200	178	5.04	2.51	0.765	Mar. 27	0745	178	5.04	2.51	0.765
Jan. 9	1430	142	4.02	2.39	0.728	May 14	1900	151	4.28	2.42	0.738
Jan. 26	1515	*435	12.3	*3.30	1.006	Aug. 28	1530	154	4.36	2.43	0.741

Minimum discharge, 2.4 ft^3/s (0.06 m^3/s) Aug. 26, gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.9	57	14	19	12	25	9.7	12	4.5	12	30
2	4.5	4.0	34	14	18	11	22	9.4	10	4.4	9.5	21
3	4.1	7.5	16	13	17	11	21	9.1	13	36	6.4	8.5
4	3.4	18	13	11	16	11	23	10	20	81	5.3	5.8
5	2.8	13	14	11	15	10	28	16	15	29	6.1	4.5
6	2.7	7.7	23	12	14	10	23	16	11	12	6.4	4.0
7	2.9	48	15	14	18	9.8	26	13	11	7.7	5.9	3.8
8	2.8	115	9.4	22	16	9.6	21	13	13	6.0	5.1	3.9
9	12	42	9.4	112	16	9.9	18	41	16	6.6	4.2	4.0
10	20	16	7.7	47	16	10	16	43	12	6.0	3.8	3.6
11	9.2	21	6.4	18	16	12	17	18	9.1	6.1	3.9	3.5
12	4.7	16	5.6	13	16	16	20	13	8.2	5.1	6.1	3.4
13	3.7	11	6.8	14	16	23	17	12	13	4.5	13	3.3
14	7.3	8.6	15	28	15	52	15	99	12	4.3	9.1	2.9
15	21	7.7	36	29	15	129	14	91	8.6	6.6	5.0	3.7
16	21	7.8	20	18	14	89	13	45	7.4	8.2	4.0	4.5
17	25	11	13	15	14	39	13	57	7.9	7.6	3.5	4.3
18	19	18	71	33	14	28	13	39	8.4	6.5	3.2	3.8
19	10	12	127	34	14	32	22	30	7.7	5.0	2.8	7.0
20	7.4	8.5	48	24	13	67	41	23	6.7	4.3	2.7	7.5
21	5.6	7.8	68	18	13	63	23	19	8.5	4.0	2.7	4.8
22	4.7	9.1	58	19	12	69	16	17	15	3.9	2.5	4.1
23	4.2	23	24	18	12	42	14	16	10	3.8	2.5	3.9
24	3.9	24	21	17	12	33	13	33	6.9	3.6	2.5	3.7
25	3.8	14	30	39	12	26	12	37	5.7	5.5	2.5	3.4
26	5.4	40	26	227	13	60	12	20	5.8	6.1	2.4	3.1
27	10	23	16	134	13	148	12	17	13	5.3	15	2.9
28	9.2	12	12	67	12	69	11	15	11	7.1	127	2.8
29	5.9	11	11	33	---	35	10	15	6.7	6.1	63	2.8
30	4.5	16	11	24	---	29	10	14	5.2	4.5	12	2.7
31	4.0	---	13	21	---	26	---	12	---	8.0	8.4	---
TOTAL	248.4	576.6	837.3	1113	411	1191.3	541	822.2	309.8	309.3	358.5	167.2
MEAN	8.01	19.2	27.0	35.9	14.7	38.4	18.0	26.5	10.3	9.98	11.6	5.57
MAX	25	115	127	227	19	148	41	99	20	81	127	30
MIN	2.7	3.9	5.6	11	12	9.6	10	9.1	5.2	3.6	2.4	2.7
CFSM	.94	2.24	3.15	4.19	1.72	4.48	2.10	3.09	1.20	1.17	1.35	.65
IN.	1.08	2.50	3.63	4.83	1.78	5.17	2.35	3.57	1.34	1.34	1.56	.73

CAL YR 1977 TOTAL 4414.2 MEAN 12.1 MAX 129 MIN 1.5 CFSM 1.41 IN 19.16
WTR YR 1978 TOTAL 6885.6 MEAN 18.9 MAX 227 MIN 2.4 CFSM 2.21 IN 29.88

RESERVOIR IN CHRISTINA RIVER BASIN

01480684 MARSH CREEK RESERVOIR.--Lat 40°03'24", long 75°43'06", Chester County, Hydrologic Unit 02040205, on right bank at dam on Marsh Creek, 0.3 mi (0.5 km) upstream from mouth and 3.2 mi (5.1 km) north of Downingtown. DRAINAGE AREA, 20.1 mi^2 (52.1 km^2). PERIOD OF RECORD, November 1973 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Pennsylvania Department of Environmental Resources).

Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft (109.58 m). Storage began November 1973. Total capacity 22,190 acre-ft (27.4 hm^3) at elevation 373 ft (113.69 m). Reservoir is used for water supply, flood control and recreation. Figures given herein represent contents above lowest gate sill at elevation 289.5 ft (88.240 m). Records furnished by Pennsylvania Department of Environmental Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 16,020 acre-ft (19.8 hm^3) Jan. 27, 1978 (elevation, 362.84 ft or 110.594 m); minimum, (after first filling), 10,410 acre-ft (12.8 hm^3) Mar. 3, 1976 (elevation, 351.75 ft or 107.213 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 16,020 acre-ft (19.8 hm^3) Jan. 27 (elevation, 362.84 ft or 110.594 m); minimum, 14,130 acre-ft (17.4 hm^3) May 30 (elevation, 359.40 ft or 109.621 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)	Elevation (feet)	Contents (acre-feet)	Change in contents (equivalent in cfs)
	01480684 Marsh Creek Reservoir					
Sept. 30, 1977...........	360.13	14,530	--			
Oct. 31	360.02	14,470	- 1.0			
Nov. 30	360.56	14,770	+ 5.0			
Dec. 31	360.72	14,860	+ 1.5			
CAL YR 1977	--	--	+ .5			
Jan. 31	360.87	14,940	+ 1.3			
Feb. 28	360.02	14,470	- 8.5			
Mar. 31	360.95	14,980	+ 8.3			
Apr. 30	359.83	14,370	-10.3			
May 31	359.49	14,180	- 3.1			
June 30	359.90	14,400	+ 3.7			
July 31	359.98	14,450	+ .8			
Aug. 31	360.63	14,810	+ 5.9			
Sept. 30	359.78	14,340	- 7.9			
WTR YR 1978	--	--	- .3			

01480685 MARSH CREEK NEAR DOWNINGTOWN, PA

LOCATION.--Lat 40°03'19", long 75°43'00", Chester County, Hydrologic Unit 02040205, on left bank 1,000 ft (305 m) downstream from Marsh Creek Dam, 0.2 mi (0.3 km) upstream from mouth and 3.0 mi (4.8 km) north of Downingtown.

DRAINAGE AREA.--20.3 mi^2 (52.6 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 280 ft (85 m), from topographic map.

REMARKS.--Records good. Flow completely regulated since November 1973 by Marsh Creek Reservoir 1,000 ft (305 m) upstream (see p. 263).

AVERAGE DISCHARGE.--5 years, 33.8 ft^3/s (0.957 m^3/s), 22.61 in/yr (574 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 423 ft^3/s (12.0 m^3/s) Feb. 9, 1976, gage height, 3.46 ft (1.055 m), from rating curve extended above 200 ft^3/s (5.7 m^3/s); minimum daily, 0.31 ft^3/s (0.009 m^3/s) Dec. 22, 23, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft^3/s (9.12 m^3/s) Jan. 13, gage height, 3.26 ft (0.994 m); minimum daily, 3.6 ft^3/s (0.102 m^3/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	50	46	123	28	126	19	9.4	16	15	57
2	15	11	56	44	108	29	110	19	9.7	15	15	59
3	14	12	54	43	97	30	98	19	12	27	15	50
4	12	16	48	40	87	30	90	20	15	51	15	43
5	11	17	45	37	81	30	86	23	16	87	16	36
6	10	17	45	36	39	29	82	24	17	95	18	31
7	9.1	32	43	35	17	29	79	25	18	81	18	26
8	8.5	76	39	37	22	28	77	44	21	43	17	23
9	12	82	37	76	27	28	75	74	23	18	16	21
10	15	77	33	91	35	27	73	81	23	17	15	18
11	15	70	30	85	43	27	47	77	22	17	14	17
12	15	63	28	74	69	30	15	71	22	16	14	16
13	13	54	25	198	83	37	17	67	23	15	14	15
14	13	45	27	138	55	58	19	68	23	15	15	14
15	17	40	37	41	25	104	21	68	22	16	14	13
16	20	36	39	44	28	130	23	79	21	16	14	8.5
17	29	34	38	47	29	151	24	102	20	17	13	3.6
18	29	35	59	64	31	156	26	127	20	17	12	4.3
19	26	33	100	96	57	139	31	111	20	16	11	7.2
20	24	30	104	121	67	135	61	97	19	15	10	8.3
21	21	28	108	108	39	130	90	85	20	15	8.5	8.9
22	18	26	111	96	18	129	82	77	25	14	8.0	9.3
23	16	31	98	88	20	121	76	70	24	8.5	7.5	9.2
24	15	35	84	59	21	110	50	68	23	4.5	7.0	9.0
25	14	35	79	34	23	100	14	70	21	5.8	6.8	8.8
26	14	44	76	144	24	79	15	67	19	7.3	6.5	8.3
27	15	46	70	229	27	117	16	63	21	8.0	10	7.9
28	15	43	63	227	28	136	17	61	21	12	48	7.8
29	14	40	57	208	---	124	18	59	19	12	68	7.3
30	13	39	53	169	---	147	19	37	18	11	62	7.1
31	12	---	49	146	---	147	---	9.4	---	13	54	---
TOTAL	489.6	1158	1785	2901	1323	2595	1577	1881.4	587.1	721.1	577.3	554.5
MEAN	15.8	38.6	57.6	93.6	47.3	83.7	52.6	60.7	19.6	23.3	18.6	18.5
MAX	29	82	111	229	123	156	126	127	25	95	68	59
MIN	8.5	11	25	34	17	27	14	9.4	9.4	4.5	6.5	3.6
MEAN≠	14.8	43.6	59.1	94.9	38.8	92.0	42.3	57.6	23.3	24.1	24.5	10.6
CFSM≠	.72	2.15	2.91	4.67	1.91	4.53	2.08	2.84	1.15	1.19	1.21	.52
IN.≠	.83	2.40	3.35	5.38	1.99	5.22	2.32	3.27	1.28	1.37	1.40	.58

CAL YR 1977 TOTAL 9798.3 MEAN 26.8 MAX 116 MIN 3.1 MEAN≠ 27.3 CFSM≠ 1.34 IN.≠ 18.28
WTR YR 1978 TOTAL 16150.0 MEAN 44.2 MAX 229 MIN 3.6 MEAN≠ 43.9 CFSM≠ 2.16 IN.≠ 29.39

≠ Adjusted for change in contents in Marsh Creek Reservoir.

01480685 MARSH CREEK NEAR DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1973 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.5°C Aug. 2, 1975, Jul. 19, 1977; minimum, 1.0°C Dec. 22, 1973, Feb. 9, 10, 1974.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 30.0°C July 24; minimum, 1.0°C Feb. 6, 7.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.5	19.0	14.0	13.0	13.0	7.5	7.0	7.5	3.0	2.5	2.5
2	20.5	18.5	19.5	14.0	13.5	14.0	7.5	7.0	7.5	4.0	2.5	2.5
3	19.0	17.5	18.0	14.0	12.0	13.0	7.5	7.0	7.0	3.0	2.5	2.5
4	18.5	17.0	17.5	12.0	11.0	11.5	7.0	7.0	7.0	3.0	2.5	2.5
5	18.5	17.0	17.5	11.0	10.5	10.5	7.0	6.5	7.0	3.0	2.5	2.5
6	17.5	17.0	17.0	10.5	10.5	10.5	7.0	6.0	6.5	3.5	3.0	3.0
7	18.0	16.5	17.0	---	---	---	6.0	5.0	5.5	3.0	3.0	3.0
8	17.0	16.5	16.5	---	---	---	5.5	5.0	5.0	4.0	3.0	3.5
9	17.0	16.0	16.5	---	---	---	5.5	4.0	5.0	4.0	2.0	2.5
10	16.5	15.5	16.0	---	---	---	4.5	3.5	4.0	2.0	2.0	2.0
11	16.5	15.5	15.5	---	---	---	4.0	3.5	3.5	2.0	1.5	2.0
12	16.0	15.0	15.5	---	---	---	4.0	3.5	3.5	2.0	1.5	2.0
13	15.5	14.5	15.0	---	---	---	4.0	3.5	3.5	2.5	2.0	2.5
14	14.5	13.5	14.0	---	---	---	4.0	3.0	3.5	3.5	2.0	2.0
15	14.5	13.5	14.0	11.0	10.5	10.5	4.5	3.5	4.0	2.0	1.5	2.0
16	14.5	13.0	14.0	11.0	10.0	10.5	4.5	3.5	4.0	2.0	1.5	2.0
17	13.0	12.5	13.0	11.0	10.0	10.5	4.0	3.5	4.0	2.0	1.5	2.0
18	13.0	12.5	12.5	10.5	9.5	10.0	4.0	2.5	3.5	2.5	2.0	2.0
19	13.0	12.5	12.5	10.5	9.5	10.0	4.0	3.5	4.0	2.5	2.0	2.0
20	12.5	12.0	12.5	10.5	9.5	9.5	4.0	4.0	4.0	2.5	2.0	2.5
21	13.5	12.0	12.5	10.0	9.5	9.5	4.0	3.5	4.0	2.5	2.5	2.5
22	13.5	12.0	12.5	10.0	9.5	9.5	3.5	3.5	3.5	2.5	2.5	2.5
23	13.5	12.0	12.5	9.5	9.0	9.0	3.5	3.5	3.5	3.0	2.5	2.5
24	13.0	12.0	12.5	10.0	9.0	9.5	3.5	3.5	3.5	4.5	2.0	2.5
25	13.5	12.0	12.5	9.0	8.5	9.0	4.0	3.0	3.5	3.5	1.5	2.0
26	13.0	12.0	12.5	9.0	8.0	8.5	3.0	2.0	2.5	2.0	1.5	2.0
27	14.0	13.0	13.5	8.5	7.5	8.5	2.5	2.0	2.5	2.0	1.5	2.0
28	15.5	12.5	14.0	8.5	7.5	8.0	2.5	2.0	2.5	2.0	1.5	2.0
29	13.0	12.0	12.5	8.0	7.5	7.5	2.5	2.0	2.5	2.0	2.0	2.0
30	13.0	12.5	12.5	7.5	7.0	7.5	3.0	2.5	2.5	2.0	2.0	2.0
31	13.0	12.5	13.0	---	---	---	3.0	2.5	2.5	2.0	2.0	2.0
MONTH	20.5	12.0	14.5	14.0	7.0	10.0	7.5	2.0	4.5	4.5	1.5	2.5

01480685 MARSH CREEK NEAR DOWNINGTON, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SFPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	2.0	2.0	2.5	2.0	2.0	6.0	5.0	5.5	---	---	---
2	2.0	2.0	2.0	2.5	2.0	2.0	6.5	5.0	5.5	---	---	---
3	2.5	2.0	2.0	2.0	2.0	2.0	5.5	5.0	5.5	---	---	---
4	2.5	2.0	2.5	2.5	2.0	2.0	6.5	5.5	6.0	---	---	---
5	2.5	2.0	2.5	2.5	2.0	2.0	7.0	6.0	6.5	---	---	---
6	4.0	1.0	2.0	2.5	2.0	2.0	7.0	6.5	6.5	---	---	---
7	2.0	1.0	1.5	2.5	2.0	2.0	8.5	6.5	8.0	---	---	---
8	2.0	1.5	2.0	2.0	2.0	2.0	8.5	7.0	7.5	11.5	11.0	11.0
9	2.0	1.5	2.0	2.0	2.0	2.0	8.0	6.0	7.5	13.0	11.0	11.5
10	2.0	1.5	2.0	2.0	2.0	2.0	---	---	---	12.5	11.5	12.0
11	2.5	2.0	2.0	3.0	2.0	2.0	8.5	7.0	8.0	13.0	11.0	12.0
12	2.5	2.0	2.5	3.0	2.0	2.0	10.0	7.5	8.5	12.0	11.0	11.5
13	3.5	2.5	2.5	3.5	2.0	2.5	9.5	7.5	8.5	11.5	11.0	11.0
14	4.0	2.0	2.5	3.0	2.0	2.0	10.0	8.5	9.0	14.0	10.5	13.0
15	3.0	2.0	2.0	3.5	2.0	2.5	10.0	8.0	9.0	14.0	13.5	14.0
16	2.5	2.0	2.0	2.5	2.5	2.5	10.0	8.5	9.0	14.0	13.5	14.0
17	2.5	2.0	2.0	2.5	2.0	2.5	9.5	8.5	9.0	14.0	13.0	13.5
18	2.0	2.0	2.0	3.0	2.5	2.5	10.0	8.5	9.0	13.5	13.0	13.0
19	3.0	2.0	2.5	3.5	2.5	2.5	9.0	8.5	8.5	15.5	13.0	14.0
20	3.0	2.5	2.5	5.0	2.5	3.0	9.5	9.0	9.0	16.0	13.5	14.5
21	4.0	2.0	2.5	3.5	3.0	3.0	9.0	9.0	9.0	16.0	13.0	14.5
22	3.5	2.0	2.0	4.0	3.0	3.5	10.0	9.0	9.0	14.5	13.0	13.5
23	2.5	2.0	2.0	4.0	3.0	3.5	9.0	9.0	9.0	14.0	13.0	13.0
24	2.5	2.0	2.0	4.0	3.5	3.5	10.5	7.0	9.5	13.5	12.5	13.0
25	3.0	2.0	2.0	4.0	3.5	3.5	10.0	9.0	9.5	15.0	13.0	13.5
26	2.5	2.0	2.0	3.5	3.5	3.5	9.5	9.5	9.5	14.0	13.0	13.5
27	2.5	2.0	2.0	4.0	3.5	3.5	9.5	9.5	9.5	13.0	12.5	13.0
28	2.5	2.0	2.0	4.5	3.5	4.0	10.5	9.5	9.5	13.0	12.5	13.0
29	---	---	---	5.5	3.5	4.0	11.5	9.5	10.5	13.0	12.5	12.5
30	---	---	---	5.0	3.5	4.5	11.5	11.0	11.0	14.5	12.0	13.0
31	---	---	---	5.5	4.0	5.0	---	---	---	14.5	13.5	14.0
MONTH	4.0	1.0	2.0	5.5	2.0	3.0	11.5	5.0	8.5	16.0	10.5	13.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.5	12.0	13.0	20.0	18.0	19.0	25.5	24.5	25.0	26.0	23.5	25.0
2	14.5	12.5	13.0	18.5	17.5	18.0	25.0	24.5	24.5	24.0	22.5	23.5
3	15.0	13.0	14.0	23.5	17.0	18.5	26.0	24.5	24.5	23.5	22.0	22.5
4	17.5	15.0	16.0	23.5	22.5	23.0	25.5	24.5	25.0	23.0	21.5	22.0
5	17.5	15.5	16.5	23.0	18.0	20.5	25.5	24.5	25.0	23.0	21.0	21.5
6	18.5	16.0	17.0	18.5	17.0	17.5	26.0	24.5	25.0	22.5	20.5	21.5
7	17.0	16.5	17.0	17.0	16.0	16.5	26.0	24.5	25.0	21.0	20.5	21.0
8	18.5	17.0	17.5	20.0	15.5	17.5	27.0	24.5	25.5	20.5	18.5	19.5
9	20.0	17.5	18.5	21.5	18.0	19.5	27.0	25.0	26.0	20.0	17.0	18.5
10	20.0	17.5	18.5	21.0	19.0	20.0	27.0	25.0	26.0	18.5	17.0	17.5
11	20.0	18.0	18.5	20.5	18.0	19.5	27.0	25.0	25.5	18.0	16.5	17.5
12	20.0	17.5	18.5	20.5	17.5	18.5	27.0	25.0	26.0	18.0	16.5	17.5
13	19.5	17.5	18.5	19.5	17.0	18.0	27.0	24.5	26.0	17.5	16.0	16.5
14	20.5	17.0	18.0	17.5	17.0	17.0	28.5	26.0	27.0	17.0	15.5	16.0
15	19.0	17.0	17.5	19.5	17.0	18.0	27.5	26.0	27.0	16.0	15.5	16.0
16	18.5	17.0	17.5	19.0	17.5	18.0	27.0	26.0	26.5	22.0	15.5	19.0
17	17.0	16.5	17.0	19.0	17.5	18.5	29.0	26.0	27.0	22.5	19.5	20.5
18	19.0	16.5	17.5	20.5	17.5	19.0	28.0	26.0	27.0	23.5	20.0	21.5
19	---	---	---	20.0	18.0	19.0	29.0	26.0	27.0	24.0	20.5	21.5
20	---	---	---	19.5	17.5	18.5	27.5	25.5	26.5	22.5	20.5	21.0
21	19.5	18.5	19.0	20.0	17.5	18.5	27.0	24.5	26.0	22.0	20.0	20.5
22	21.0	19.5	20.5	20.0	17.5	18.5	27.5	24.5	26.0	22.0	19.0	20.5
23	21.5	20.0	21.0	28.0	18.0	23.0	27.5	24.5	26.0	21.0	18.0	19.5
24	21.0	20.0	20.5	30.0	27.0	28.0	27.0	24.5	25.5	21.0	17.0	18.5
25	21.0	19.5	20.0	27.5	26.0	27.0	25.5	24.5	25.0	20.0	17.0	18.0
26	20.0	18.5	19.0	27.0	25.0	26.0	26.0	24.0	24.5	18.5	17.0	17.5
27	21.5	18.5	20.0	27.0	25.5	26.0	25.0	23.5	24.0	---	---	---
28	21.0	19.5	20.5	27.0	25.0	26.0	26.0	22.0	25.0	---	---	---
29	21.5	19.5	20.5	27.0	24.5	25.5	26.5	25.0	25.5	---	---	---
30	21.0	19.0	20.0	27.0	24.0	26.0	26.5	25.5	26.0	---	---	---
31	---	---	---	26.0	25.0	25.0	26.5	25.5	26.0	---	---	---
MONTH	21.5	12.0	18.0	30.0	15.5	21.0	29.0	22.0	25.5	26.0	15.5	20.0

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA

LOCATION.--Lat 40°02'05", long 75°42'32", Chester County, Hydrologic Unit 02040205, on right bank 20 ft (6 m) downstream from bridge on Dowlin Forge Road, 200 ft (60 m) east of State Highway 282, 0.4 mi (0.6 km) downstream from Shamona Creek, 1.5 mi (2.4 km) downstream from Marsh Creek, 2.0 mi (3.2 km) upstream from Beaver Creek, and 2.2 mi (3.5 km) north of Downingtown.

DRAINAGE AREA.--60.6 mi^2 (157.0 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1948-57, October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map. Prior to July 30, 1966, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated by Marsh Creek Reservoir 1.9 mi (3.1 km) upstream (see p. 265).

AVERAGE DISCHARGE.--13 years, 92.4 ft^3/s (2.617 m^3/s), 20.71 in/yr (526 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,070 ft^3/s (229 m^3/s) June 22, 1972, gage height, 12.06 ft (3.676 m), from floodmark, from rating curve extended above 5,000 ft^3/s (140 m^3/s); minimum, 7.2 ft^3/s (0.20 m^3/s) Sept. 2, 3, 11, 12, 13, 1966, gage height, 1.80 ft (0.549 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,190 ft^3/s (90.3 m^3/s) Jan. 26, gage height, 7.38 ft (2.249 m); minimum, 26 ft^3/s (0.74 m^3/s) Sept. 16, 17, 18, 28, 29, 30; minimum gage height, 2.10 ft (0.641 m) Aug. 24; minimum daily, 26 ft^3/s (0.74 m^3/s) Sept. 17, 18, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	40	404	124	217	82	237	69	64	50	62	217
2	42	40	159	121	196	80	205	67	61	49	57	113
3	37	52	130	111	170	82	190	65	74	535	52	95
4	32	99	115	101	150	82	187	69	88	223	50	82
5	29	63	121	103	130	80	211	88	74	169	59	70
6	28	57	156	105	120	79	175	84	70	160	57	62
7	28	376	111	109	128	79	190	79	70	137	54	57
8	27	642	90	166	103	75	160	93	80	95	50	54
9	101	210	91	861	105	77	147	269	79	64	45	52
10	70	169	74	240	109	79	142	205	70	61	43	45
11	48	213	68	196	109	84	121	142	67	62	42	41
12	41	137	63	174	135	109	93	125	64	56	45	40
13	38	113	72	302	150	178	86	118	80	53	56	39
14	52	97	124	404	125	775	82	731	69	52	47	36
15	140	86	191	144	90	775	82	326	64	64	43	37
16	91	78	115	121	92	401	82	294	62	57	41	34
17	156	91	103	128	92	310	82	318	64	57	40	26
18	93	121	993	400	92	286	84	326	64	54	37	26
19	76	81	559	237	88	424	128	265	62	50	35	53
20	68	72	312	243	84	415	211	211	59	49	34	37
21	58	68	671	230	82	433	172	181	75	47	31	32
22	49	70	334	196	77	392	147	157	99	46	30	33
23	45	182	255	174	84	279	133	145	72	40	29	32
24	42	111	219	142	82	248	111	205	64	34	28	30
25	41	99	288	539	79	205	74	175	59	47	28	29
26	49	320	204	2020	84	764	72	145	59	45	29	28
27	63	126	166	600	84	811	74	135	142	43	80	28
28	52	109	151	415	82	362	72	128	69	61	451	27
29	48	101	137	358	---	286	70	123	59	46	130	26
30	42	121	128	294	---	279	70	99	54	43	105	26
31	41	---	128	251	---	269	---	67	---	62	99	---
TOTAL	1765	4144	6732	9609	3139	8880	3890	5504	2137	2611	1989	1507
MEAN	56.9	138	217	310	112	286	130	178	71.2	84.2	64.2	50.2
MAX	156	642	993	2020	217	811	237	731	142	535	451	217
MIN	27	40	63	101	77	75	70	65	54	34	28	26
MEAN≠	55.9	143	218	311	104	294	120	175	74.9	85.0	70.1	42.3
CFSM≠	.92	2.36	3.60	5.13	1.72	4.85	1.98	2.89	1.24	1.40	1.16	.70
IN.≠	1.06	2.63	4.15	5.91	1.79	5.59	2.21	3.33	1.38	1.61	1.34	.78

CAL YR 1977 TOTAL 31896 MEAN 87.4 MAX 993 MIN 16 MEAN≠ 87.9 CFSM≠ 1.45 IN.≠ 19.65
WTR YR 1978 TOTAL 51907 MEAN 142 MAX 2020 MIN 26 MEAN≠ 142 CFSM≠ 2.34 IN.≠ 31.78

≠ Adjusted for change in contents in Marsh Creek Reservoir.

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1970 to current year.

COOPERATION.--Four water-quality analyses for the 1978 water year were furnished by the Pennsylvania Department of Environmental Resources.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 25...	1400	175	7.2	14.5	11.1	56	24	14	5.1	8.4

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 25...	2.6	39	0	32	3.9	15	14	.1	12	104

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
OCT 25...	91	1.2	.01	1.2	.01	.29	.30	1.5	.02	.01

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 25...	0	0	0	1	60	4	60	2	0

01480700 EAST BRANCH BRANDYWINE CREEK NEAR DOWNINGTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
NOV 03...	0900	9813	9813	42	180	--	--	--
FEB 22...	0900	9813	9813	60	180	--	--	--
MAY 30...	0905	9813	9813	123	170	--	--	--
AUG 16...	0930	9813	9813	41	170	7.5	23.5	7.1

DATE	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	HARDNESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)
NOV 03...	--	58	--	15	5.5	40	10	17	--
FEB 22...	--	54	--	12	6.0	32	24	20	--
MAY 30...	--	48	--	12	4.9	34	10	16	--
AUG 16...	8	53	0	16	3.5	44	15	17	.1

DATE	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
NOV 03...	390	0	164	1.7	.02	.18	.07	110
FEB 22...	34	4	38	3.0	.03	.10	.19	130
MAY 30...	114	8	122	1.8	.02	.14	.10	240
AUG 16...	144	16	--	1.6	.02	.08	.10	70

DATE	TIME	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
AUG 16...	0930	<3	<10	<10	<50	60	<10	30

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA

LOCATION.--Lat 39°58'07", long 75°40'25", Chester County, Hydrologic Unit 02040205, on left bank at downstream side of Sugars Bridge (State Highway 322), 2,000 ft (610 m) upstream from Valley Creek, 1.5 mi (2.4 km) north of Marshallton, and 3.3 mi (5.3 km) southeast of Downingtown.

DRAINAGE AREA.--89.9 mi^2 (232.8 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1972 to current year.

REVISED RECORDS.--WDR PA-75-1: 1972(P), 1973, 1974.

GAGE.--Water-stage recorder Apr. 11, 1972 to June 22, 1972, Nov. 18, 1972 to present. Altitude of gage is 195 ft (59.4 m), from topographic map. Nonrecording gage Feb. 1 to Apr. 10, June 25 to Nov. 17, 1972.

REMARKS.--Records good. Flow regulated by Marsh Creek Reservoir, about 7.5 mi (12.1 km) upstream since November 1973 (see p.263).

AVERAGE DISCHARGE.--6 years, 164 ft^3/s (4.64 m^3/s), 24.77 in/yr (629 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,160 ft^3/s (231 m^3/s) June 22, 1972, gage height, 13.4 ft (4.08 m), from floodmark, from rating curve extended above 2,200 ft^3/s (62.3 m^3/s) on basis of slope-area measurement of peak flow; minimum, 23 ft^3/s (0.65 m^3/s) July 25, 1977, gage height, 1.97 ft (0.600 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,520 ft^3/s (128 m^3/s) Jan. 26, gage height, 11.07 ft (3.374 m); minimum, 42 ft^3/s (1.19 m^3/s) Oct. 8, Aug. 24, 25, 27, gage height, 2.19 ft (0.668 m); minimum daily, 44 ft^3/s (1.25 m^3/s) Aug. 24. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	60	542	194	349	138	368	117	123	84	91	285
2	69	60	247	188	315	135	321	114	116	82	84	149
3	60	77	199	172	283	130	296	114	133	905	77	123
4	53	130	177	161	240	130	295	119	163	425	77	107
5	48	87	186	159	210	131	350	148	135	228	92	94
6	48	79	242	162	190	129	273	138	127	206	96	87
7	48	540	171	166	194	127	298	130	122	175	80	81
8	45	819	142	256	196	127	252	143	138	135	75	80
9	162	302	146	1310	187	129	230	373	134	96	69	77
10	110	233	124	352	188	132	220	340	119	93	70	69
11	74	302	113	262	194	143	202	220	112	94	67	68
12	67	191	107	233	209	195	168	193	109	86	69	69
13	62	159	116	343	231	324	153	185	135	82	79	68
14	79	137	211	574	212	1110	146	1120	115	81	70	62
15	180	125	303	218	160	1230	142	531	104	95	65	65
16	129	116	178	175	158	661	141	445	102	88	62	64
17	232	133	157	179	161	475	142	500	102	87	61	53
18	129	179	1490	575	161	431	141	508	104	83	56	52
19	102	122	871	332	150	547	218	402	101	78	53	143
20	94	110	491	321	150	610	343	324	96	76	51	72
21	83	106	936	297	140	582	258	283	145	74	48	63
22	76	110	516	246	135	585	221	250	178	72	46	62
23	71	285	389	216	138	422	201	232	113	67	45	61
24	67	170	341	190	136	373	182	302	102	58	44	57
25	65	149	428	614	140	312	132	271	95	72	44	55
26	74	478	312	3040	145	1090	128	227	93	73	45	52
27	90	192	251	989	142	1440	128	210	291	87	254	52
28	77	164	231	673	139	608	126	200	122	126	830	51
29	69	157	211	541	---	482	122	195	97	73	187	49
30	64	181	202	443	---	431	121	174	90	69	139	48
31	61	---	202	382	---	411	---	130	---	88	140	---
TOTAL	2652	5953	10232	13963	5253	13770	6318	8638	3716	4138	3266	2418
MEAN	85.5	198	330	450	188	444	211	279	124	133	105	80.6
MAX	232	819	1490	3040	349	1440	368	1120	291	905	830	285
MIN	45	60	107	159	135	127	121	114	90	58	44	48
MEAN≠	84.5	203	332	451	180	452	201	276	128	134	111	72.7
CFSM≠	.94	2.25	3.69	5.02	2.00	5.03	2.24	3.07	1.42	1.49	1.23	.81
IN.≠	1.08	2.51	4.25	5.79	2.08	5.80	2.50	3.54	1.58	1.72	1.42	.90

CAL YR 1977 TOTAL 49564 MEAN 136 MAX 1490 MIN 28 MEAN≠ 136 CFSM≠ 1.51 IN.≠ 20.58
WTR YR 1978 TOTAL 80317 MEAN 220 MAX 3040 MIN 44 MEAN≠ 220 CFSM≠ 2.45 IN.≠ 33.17

≠ Adjusted for change in contents in Marsh Creek Reservoir.

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1972 to current year.
pH: February 1972 to current year.
WATER TEMPERATURES: February 1972 to current year.
DISSOLVED OXYGEN: February 1972 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 652 micromhos Feb. 6, 1977; minimum, 76 micromhos Jan. 25, 1978.
pH: Maximum, 9.9 May 13, June 5, 1973; minimum, 5.4 Oct. 24, 26, 1973.
WATER TEMPERATURES: Maximum, 33.0°C July 19, 1977; minimum, freezing point Jan. 22, 23, 1976.
DISSOLVED OXYGEN: Maximum, 16.3 mg/L Dec. 1, 1976; minimum, 1.1 mg/L Aug. 17, 1974.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 320 micromhos Nov. 3; minimum, 76 micromhos Jan. 25.
pH: Maximum, 9.0 Apr. 30, May 2, 3; minimum, 6.1 Aug. 31, Dec. 18, 19.
WATER TEMPERATURES: Maximum, 29.5°C July 23, Aug. 17; minimum, 0.5°C on many days during January. February and March.
DISSOLVED OXYGEN: Maximum, 14.6 mg/L May 3; minimum, 4.5 mg/L Aug. 21.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CAR-BONATE (MG/L AS CO3)	CARBON, ORGANIC TOTAL (MG/L AS C)
JAN									
30...	1600	461	79	6.9	4.5	--	K1000	0	6.1
FEB									
08...	1200	191	183	--	2.5	13.1	--	--	4.4
13...	1030	220	177	7.1	1.5	12.4	--	--	7.4
20...	1030	150	189	7.3	1.5	12.9	--	0	3.6
27...	1130	141	184	7.3	2.0	12.9	197	--	4.9
MAR									
06...	1200	125	227	7.4	2.5	13.6	128	--	10
13...	1130	225	219	7.4	5.8	12.9	8310	--	--
20...	1130	482	161	6.9	5.2	12.6	1390	--	1.4
27...	1100	1950	126	6.5	6.4	11.5	2215	--	12
APR									
03...	1130	294	162	7.0	8.0	12.2	5400	--	5.8
10...	1230	220	--	--	10.0	12.1	--	--	7.6
17...	1100	141	158	8.0	11.0	12.9	33	--	5.6
24...	1030	191	173	8.0	12.5	12.4	118	--	11
MAY									
01...	1030	118	217	8.0	13.0	12.7	101	--	9.2
08...	1100	125	203	7.8	13.0	10.8	168	--	10
15...	1100	657	138	7.0	14.5	8.9	11300	--	8.0
21...	1400	285	153	7.5	20.0	9.6	127	--	4.2
30...	1100	189	168	7.5	18.0	9.9	160	--	8.1
JUN									
05...	1100	129	193	7.8	18.0	10.1	96	--	4.9
12...	1200	111	210	8.2	21.0	10.4	277	--	5.2
19...	1330	101	221	8.5	24.0	10.7	--	--	7.2
26...	1030	94	223	7.4	20.5	8.2	697	--	--
JUL									
03...	1130	157	206	7.0	17.0	8.4	7200	--	9.1
14...	0900	79	245	7.2	20.5	7.2	--	--	2.8
17...	1100	88	238	7.2	20.5	8.6	384	--	8.3
24...	1200	61	270	8.2	26.0	10.5	223	--	7.2
31...	1400	100	240	7.3	--	8.7	1067	--	--
AUG									
07...	1100	78	218	7.3	24.5	8.5	14000	--	2.6
14...	1130	72	248	7.5	25.0	10.1	392	--	3.4
28...	1440	585	--	--	--	7.2	49000	--	10
SEP									
05...	1200	95	221	7.3	20.5	8.8	372	--	4.7
11...	1130	68	252	7.5	19.5	10.0	572	--	--
19...	1130	151	199	7.0	21.5	7.5	28000	--	9.7

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	275	254	264	303	265	285	215	139	180	---	---	---
2	258	228	245	319	288	303	217	203	211	---	---	---
3	266	219	244	320	276	308	---	---	---	235	224	229
4	298	241	267	294	256	275	---	---	---	247	216	228
5	304	266	285	319	295	306	---	---	---	246	216	232
6	298	272	286	304	275	287	---	---	---	268	234	251
7	304	265	287	277	206	244	---	---	---	279	246	260
8	300	269	285	244	126	214	219	207	213	298	256	273
9	298	190	243	253	202	224	230	211	220	275	262	269
10	244	187	215	251	233	240	235	219	227	122	116	119
11	259	228	245	237	194	223	239	225	235	131	121	126
12	270	241	256	215	208	211	237	225	233	137	125	130
13	272	246	260	209	202	205	236	223	231	136	121	131
14	264	215	246	210	200	205	240	216	230	213	128	155
15	208	179	191	212	205	210	228	215	222	158	145	149
16	226	195	208	220	210	213	228	203	215	157	146	150
17	193	167	182	220	167	209	228	201	212	149	133	141
18	224	187	205	182	127	161	222	95	161	206	137	162
19	227	204	216	195	175	182	180	122	157	166	129	140
20	226	199	212	186	172	179	199	173	186	130	123	127
21	234	202	220	190	156	174	209	187	199	137	124	129
22	246	215	230	193	168	183	214	176	201	152	128	133
23	229	203	219	185	137	155	226	196	211	130	120	124
24	255	201	226	183	159	173	235	215	226	123	114	117
25	237	225	230	241	184	191	240	218	232	119	76	107
26	---	---	---	220	139	167	241	217	233	---	---	---
27	---	---	---	211	153	186	246	232	239	---	---	---
28	---	---	---	223	191	210	248	233	242	---	---	---
29	---	---	---	227	212	219	247	241	244	---	---	---
30	---	---	---	223	210	215	---	---	---	90	80	86
31	295	256	285	---	---	---	---	---	---	92	88	89
MONTH	304	167	240	320	126	219	248	95	215	298	76	162

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	190	170	181	182	176	179	240	192	220
2	---	---	---	194	165	179	184	172	179	234	202	222
3	180	172	176	189	169	181	171	161	165	242	205	226
4	183	164	171	233	174	199	175	156	165	239	202	217
5	184	161	170	214	183	195	178	160	170	202	187	192
6	184	159	170	229	190	203	177	165	170	220	191	206
7	184	160	170	221	198	206	186	166	177	218	185	201
8	186	162	171	211	202	207	192	173	183	208	183	196
9	192	168	177	220	203	210	197	176	186	182	134	169
10	192	170	177	225	208	217	---	---	---	174	128	155
11	196	171	182	243	212	226	---	---	---	201	160	182
12	192	171	181	244	227	236	172	170	171	205	176	192
13	195	171	183	236	183	215	175	158	168	197	180	190
14	204	172	185	193	106	160	173	155	166	191	96	133
15	213	193	202	139	107	121	172	151	164	161	136	149
16	209	187	195	185	118	150	169	147	161	170	139	162
17	213	188	201	196	186	190	167	148	161	176	139	159
18	208	187	196	194	187	189	178	155	168	179	158	170
19	193	172	184	190	128	174	170	147	159	179	160	169
20	206	168	183	165	133	151	152	137	144	176	151	164
21	205	177	191	168	139	155	151	139	146	160	141	152
22	226	184	195	165	141	155	164	142	154	156	132	147
23	217	185	194	177	162	170	165	145	156	154	134	146
24	213	184	194	183	175	178	208	146	176	155	126	138
25	226	191	207	190	181	185	218	187	205	169	127	146
26	219	189	207	189	113	165	210	192	201	187	137	161
27	210	184	195	153	113	131	199	184	193	182	166	175
28	194	166	182	170	154	162	219	179	202	186	165	176
29	---	---	---	177	170	173	236	187	215	179	164	173
30	---	---	---	178	172	176	236	207	222	197	157	175
31	---	---	---	180	175	177	---	---	---	203	181	195
MONTH	226	159	186	244	106	181	236	137	175	242	96	176

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	208	183	198	242	220	232	243	223	233	204	149	174
2	211	182	199	243	216	232	252	229	242	216	197	207
3	208	173	193	216	94	163	257	240	250	220	209	213
4	185	151	170	177	115	155	258	242	252	219	202	211
5	208	181	195	197	178	187	254	227	238	238	210	225
6	205	164	195	204	186	193	239	205	228	242	226	235
7	219	186	206	203	191	198	245	218	233	248	233	242
8	218	200	210	238	194	209	253	235	245	255	237	248
9	217	201	208	238	224	233	261	241	253	259	228	248
10	221	205	214	239	223	233	264	243	255	263	230	252
11	224	206	214	245	221	236	275	253	265	264	247	259
12	227	208	216	251	234	244	273	246	260	271	254	262
13	221	189	204	253	238	247	264	226	239	270	251	263
14	224	203	212	258	244	252	252	235	244	283	262	274
15	230	202	221	258	237	245	259	240	251	288	268	277
16	232	218	226	260	242	249	264	246	257	290	257	271
17	233	214	224	250	238	245	271	251	264	315	283	297
18	224	207	217	255	241	249	305	255	273	302	253	279
19	228	211	221	260	245	255	282	263	272	283	170	207
20	230	210	222	261	244	255	266	236	254	281	234	252
21	235	133	214	268	249	259	297	240	269	297	274	286
22	206	136	181	274	253	264	293	272	286	302	279	291
23	219	199	209	302	255	270	299	272	289	313	279	293
24	227	211	220	293	270	281	301	276	293	303	285	294
25	232	215	225	291	240	266	309	283	300	311	282	296
26	240	221	231	264	235	250	313	279	300	308	283	296
27	234	87	151	273	257	264	314	293	305	306	279	295
28	211	172	190	---	---	---	168	134	152	301	277	292
29	226	206	216	---	---	---	203	169	188	313	289	305
30	233	215	226	---	---	---	216	199	206	318	291	307
31	---	---	---	241	226	232	217	197	211	---	---	---
MONTH	240	87	208	302	94	236	314	134	252	318	149	262

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.3	7.1	7.2	8.0	7.3	7.5	7.3	7.0	7.2	---	---	---
2	7.5	7.1	7.2	7.7	7.2	7.4	7.3	7.3	7.3	---	---	---
3	7.6	7.1	7.4	7.5	7.1	7.3	---	---	---	7.5	7.3	7.4
4	7.6	7.2	7.4	7.4	7.1	7.2	---	---	---	7.4	7.2	7.3
5	7.6	7.1	7.4	7.6	7.1	7.3	---	---	---	7.4	7.3	7.3
6	7.6	7.2	7.3	7.4	7.1	7.2	---	---	---	7.4	7.3	7.3
7	7.7	7.2	7.4	7.3	7.0	7.2	---	---	---	7.3	7.3	7.3
8	7.8	7.2	7.4	7.3	6.7	7.1	6.7	6.6	6.6	7.4	7.2	7.3
9	7.3	7.0	7.2	7.2	7.2	7.2	6.7	6.6	6.7	7.2	6.8	6.9
10	7.4	7.1	7.2	7.2	7.1	7.2	6.7	6.6	6.7	6.9	6.7	6.9
11	7.6	7.2	7.3	7.2	7.2	7.2	6.7	6.7	6.7	6.9	6.9	6.9
12	7.5	7.2	7.3	7.3	7.2	7.2	6.7	6.7	6.7	7.0	6.9	7.0
13	7.6	7.2	7.3	7.3	7.2	7.3	6.7	6.7	6.7	7.0	6.9	7.0
14	7.5	7.2	7.4	7.4	7.3	7.3	6.7	6.6	6.6	6.9	6.9	6.9
15	7.4	7.2	7.3	7.4	7.3	7.3	6.6	6.5	6.5	6.9	6.9	6.9
16	7.6	6.7	7.3	7.4	7.3	7.3	6.7	6.5	6.6	7.0	6.7	6.9
17	7.4	7.2	7.3	7.5	7.3	7.3	6.8	6.5	6.6	6.9	6.9	6.9
18	7.6	7.3	7.4	7.5	7.3	7.4	6.6	6.1	6.4	6.9	6.8	6.8
19	7.6	7.3	7.4	7.6	7.3	7.4	6.8	6.1	6.6	6.8	6.8	6.8
20	7.7	7.3	7.4	7.6	7.4	7.5	6.8	6.8	6.8	6.8	6.8	6.8
21	7.8	7.3	7.5	7.5	7.3	7.4	6.9	6.8	6.8	6.8	6.8	6.8
22	7.8	7.3	7.5	7.5	7.3	7.4	6.9	6.8	6.9	7.2	6.8	7.0
23	7.8	7.2	7.5	7.3	7.2	7.2	7.0	6.9	6.9	7.2	7.2	7.2
24	7.9	7.3	7.5	7.4	7.2	7.3	7.0	6.9	7.0	7.2	7.2	7.2
25	8.0	7.3	7.5	7.5	7.1	7.3	7.0	7.0	7.0	7.2	6.8	7.1
26	7.4	7.2	7.3	7.3	7.1	7.2	7.0	7.0	7.0	---	---	---
27	7.6	7.1	7.3	7.4	7.3	7.3	7.1	7.0	7.1	---	---	---
28	7.7	7.1	7.3	7.5	7.3	7.4	7.1	7.1	7.1	---	---	---
29	7.8	7.2	7.4	7.4	7.3	7.4	7.1	7.1	7.1	---	---	---
30	7.9	7.3	7.5	7.4	7.3	7.3	---	---	---	6.9	6.9	6.9
31	8.0	7.3	7.5	---	---	---	---	---	---	7.0	6.9	7.0
MONTH	8.0	6.7	7.4	8.0	6.7	7.3	7.3	6.1	6.8	7.5	6.7	7.0

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.7	7.2	7.4	7.4	7.0	7.2	8.9	7.1	7.9
2	---	---	---	7.7	7.3	7.4	7.5	7.0	7.2	9.0	7.2	7.9
3	---	---	---	7.6	7.3	7.4	7.4	7.0	7.2	9.0	7.2	8.0
4	---	---	---	7.8	7.3	7.5	7.7	7.1	7.3	8.7	7.1	7.8
5	---	---	---	7.7	7.3	7.4	7.8	7.1	7.3	7.9	7.1	7.4
6	---	---	---	7.7	7.3	7.4	7.6	7.1	7.3	8.2	7.1	7.5
7	---	---	---	7.8	7.3	7.4	7.9	7.1	7.4	8.7	7.1	7.8
8	7.2	7.2	7.2	7.7	7.3	7.4	8.1	7.1	7.5	8.2	7.0	7.4
9	7.2	7.0	7.2	7.9	7.3	7.5	8.2	7.1	7.5	8.1	6.8	7.3
10	7.1	7.0	7.0	7.9	7.2	7.5	---	---	---	7.3	6.8	7.1
11	7.1	7.0	7.1	8.1	7.2	7.5	8.4	7.3	8.0	7.9	7.0	7.4
12	7.1	7.0	7.0	8.1	7.2	7.5	8.5	7.1	7.8	8.3	7.0	7.5
13	7.3	7.0	7.1	7.7	7.0	7.3	8.6	7.1	7.8	7.6	7.1	7.3
14	7.3	7.1	7.2	7.7	6.7	7.0	8.6	7.2	7.8	7.1	6.7	6.8
15	7.4	7.2	7.3	7.0	6.7	6.8	8.6	7.2	7.8	7.1	6.9	7.0
16	7.3	7.2	7.3	7.1	6.8	7.0	8.6	7.2	7.9	7.2	7.0	7.1
17	7.4	7.2	7.3	7.2	7.0	7.1	8.6	7.2	7.8	7.3	7.0	7.1
18	7.4	7.2	7.3	7.2	7.0	7.1	8.8	7.2	7.9	7.2	7.0	7.1
19	7.4	7.3	7.3	7.2	6.9	7.1	7.7	7.1	7.3	7.3	7.0	7.1
20	7.4	7.2	7.3	7.1	6.9	7.0	7.6	7.1	7.3	7.4	7.0	7.2
21	7.4	7.2	7.3	7.2	6.9	7.0	8.3	7.1	7.5	7.7	7.1	7.3
22	7.5	7.3	7.4	7.2	6.9	7.0	8.6	7.1	7.7	7.7	7.1	7.3
23	7.5	7.3	7.4	7.3	7.0	7.1	8.6	7.1	7.7	7.8	7.1	7.4
24	7.5	7.2	7.4	7.4	7.0	7.1	8.7	7.1	7.8	7.2	7.1	7.1
25	7.6	7.3	7.4	7.3	7.0	7.2	8.8	7.1	7.9	7.8	7.1	7.3
26	7.6	7.3	7.4	7.1	6.8	7.0	8.9	7.1	7.7	8.0	7.1	7.4
27	7.6	7.3	7.4	6.9	6.5	6.8	8.8	7.1	7.8	7.7	7.1	7.3
28	7.6	7.3	7.4	7.1	6.9	7.0	8.8	7.1	7.9	8.0	7.1	7.4
29	---	---	---	7.2	7.0	7.1	8.9	7.1	7.9	7.5	7.1	7.2
30	---	---	---	7.2	7.0	7.1	9.0	7.1	8.0	8.1	7.0	7.5
31	---	---	---	7.3	7.0	7.1	---	---	---	8.3	7.1	7.6
MONTH	7.6	7.0	7.3	8.1	6.5	7.2	9.0	7.0	7.6	9.0	6.7	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	7.1	7.6	7.8	7.2	7.4	7.7	7.1	7.3	7.0	6.9	7.0
2	8.5	7.1	7.6	7.6	7.2	7.4	7.6	7.1	7.3	7.2	7.0	7.1
3	7.6	7.1	7.3	7.3	6.6	7.0	8.0	7.1	7.4	7.4	7.0	7.1
4	8.2	7.1	7.5	7.1	6.7	7.0	7.8	7.1	7.3	7.4	7.0	7.1
5	8.3	7.1	7.6	7.3	7.0	7.2	7.4	7.1	7.2	7.6	7.0	7.2
6	8.6	7.2	7.8	7.3	7.0	7.1	7.7	7.1	7.3	7.8	7.1	7.3
7	8.1	7.2	7.5	7.4	7.0	7.2	8.0	7.0	7.4	8.0	7.1	7.4
8	8.2	7.2	7.5	7.5	7.1	7.2	8.1	7.1	7.5	7.3	7.1	7.2
9	8.5	7.1	7.6	7.7	7.1	7.3	8.4	7.1	7.6	7.9	7.1	7.4
10	8.5	7.1	7.6	7.8	7.1	7.4	8.4	7.1	7.6	8.1	7.1	7.4
11	8.5	7.1	7.7	8.0	7.1	7.4	8.4	7.1	7.5	8.2	7.1	7.5
12	8.5	7.1	7.4	8.1	7.2	7.5	8.3	7.1	7.6	7.8	7.1	7.3
13	7.7	7.0	7.2	8.3	7.1	7.6	8.3	7.0	7.5	7.8	7.1	7.4
14	8.3	7.1	7.5	7.6	7.1	7.3	8.5	7.0	7.6	7.8	7.1	7.4
15	8.6	7.1	7.7	8.2	7.1	7.5	8.6	7.1	7.7	7.5	7.1	7.2
16	8.7	7.2	7.8	7.8	7.1	7.3	8.6	7.1	7.7	7.7	7.0	7.2
17	7.8	7.1	7.4	8.1	7.1	7.4	8.5	7.1	7.6	7.6	7.0	7.2
18	8.6	7.2	7.7	8.2	7.1	7.5	8.4	6.8	7.4	7.9	7.0	7.3
19	8.6	7.1	7.7	8.4	7.1	7.6	8.5	7.1	7.6	7.1	6.8	7.0
20	8.6	7.1	7.6	8.5	7.0	7.6	8.5	7.0	7.5	7.6	7.1	7.3
21	7.9	6.9	7.3	8.6	7.0	7.7	8.4	7.0	7.4	7.7	7.1	7.3
22	7.6	6.9	7.2	8.6	7.0	7.7	8.5	7.1	7.6	7.3	7.0	7.1
23	7.8	7.1	7.4	8.6	7.0	7.7	8.5	7.1	7.6	7.6	7.1	7.3
24	7.9	7.1	7.4	8.8	7.0	7.7	8.7	7.1	7.7	7.6	7.1	7.2
25	8.0	7.1	7.4	8.1	7.1	7.4	8.2	7.1	7.5	7.8	7.1	7.3
26	7.6	7.1	7.3	8.3	7.1	7.6	8.5	7.1	7.7	7.9	7.2	7.4
27	7.2	6.3	7.0	8.4	7.2	7.6	7.8	7.1	7.3	8.0	7.2	7.4
28	7.4	7.1	7.2	---	---	---	6.8	6.6	6.8	7.7	7.0	7.3
29	7.6	7.2	7.3	---	---	---	7.2	6.8	7.0	7.8	7.1	7.3
30	7.7	7.2	7.4	---	---	---	7.3	7.0	7.1	7.9	7.1	7.4
31	---	---	---	7.4	7.2	7.3	7.3	6.9	7.1	---	---	---
MONTH	8.7	6.3	7.5	8.8	6.6	7.4	8.7	6.6	7.4	8.2	6.8	7.3

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.5	19.0	14.0	10.5	12.5	8.0	7.5	8.0	---	---	---
2	21.0	19.0	19.5	16.0	14.0	15.0	---	---	---	---	---	---
3	19.0	16.5	17.5	17.0	16.0	16.5	---	---	---	2.0	1.0	1.5
4	17.5	14.5	16.0	19.0	17.0	18.0	---	---	---	2.5	.5	1.5
5	18.5	14.5	16.5	19.5	18.0	19.0	---	---	---	3.5	1.0	2.5
6	17.0	15.0	16.0	18.5	16.0	17.0	---	---	---	5.5	3.5	4.5
7	16.5	14.0	15.5	16.0	15.5	16.0	---	---	---	5.5	5.0	5.0
8	15.0	13.5	14.5	16.0	14.0	15.5	6.0	6.0	6.0	7.0	5.0	6.0
9	17.0	15.0	16.0	16.0	15.5	15.5	6.0	6.0	6.0	7.5	2.5	5.5
10	15.5	14.0	15.0	16.0	16.0	16.0	6.0	5.5	5.5	2.5	1.5	2.0
11	16.0	13.0	14.5	16.0	14.5	15.0	6.0	5.0	5.5	2.5	1.5	2.0
12	16.5	14.5	15.0	14.5	13.0	13.5	5.0	4.5	5.0	3.0	1.5	2.0
13	15.0	13.0	14.5	13.0	11.0	12.0	5.5	4.5	5.0	3.0	2.5	3.0
14	14.5	12.5	13.0	11.0	9.5	10.0	6.0	5.5	6.0	3.0	2.5	3.0
15	14.0	11.5	12.5	11.5	10.0	11.0	7.0	6.0	6.5	2.5	2.0	2.5
16	15.0	12.5	14.0	13.0	11.0	12.0	7.5	5.5	6.5	2.5	1.5	2.0
17	14.0	11.0	12.0	14.5	12.5	13.5	6.0	4.5	5.0	2.5	2.0	2.5
18	13.0	9.5	11.5	12.0	9.5	10.5	7.0	3.5	5.5	3.0	2.5	2.5
19	13.5	12.0	13.0	9.5	8.0	9.0	---	---	---	3.0	2.0	2.5
20	14.5	12.5	13.5	10.0	7.5	9.0	---	---	---	2.5	1.5	2.0
21	14.5	11.5	13.0	11.0	9.0	10.0	---	---	---	3.0	2.0	2.5
22	15.0	11.5	13.5	11.0	10.5	11.0	7.5	7.0	7.0	3.0	2.0	2.5
23	14.5	12.5	13.5	10.5	9.0	9.5	7.5	7.0	7.5	2.5	1.0	1.5
24	14.0	11.0	12.5	11.0	9.5	10.0	8.0	7.5	7.5	2.0	1.0	1.5
25	14.5	11.5	13.0	9.5	8.0	9.0	8.5	8.0	8.0	3.0	2.0	2.5
26	15.0	13.5	14.0	9.0	7.0	8.0	8.0	7.5	7.5	---	---	---
27	17.5	15.0	16.0	7.5	6.0	7.0	7.5	7.0	7.0	---	---	---
28	19.0	16.5	17.5	8.0	6.0	7.0	7.0	6.5	7.0	---	---	---
29	17.0	14.5	15.5	7.0	6.5	7.0	7.0	6.5	7.0	---	---	---
30	15.0	12.0	13.5	8.0	7.0	7.5	---	---	---	4.5	4.0	4.5
31	13.0	10.5	12.0	---	---	---	---	---	---	4.0	4.0	4.0
MONTH	21.0	9.5	14.5	19.5	6.0	12.0	8.5	3.5	6.5	7.5	.5	3.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	5.0	2.5	4.0	13.5	7.5	10.5	16.0	11.0	14.0
2	---	---	---	5.0	1.0	3.5	12.0	9.0	10.5	17.5	11.0	14.5
3	4.0	2.5	3.5	3.5	1.0	2.0	9.5	7.0	7.5	18.5	12.5	15.5
4	3.5	1.0	2.0	4.5	1.0	2.5	10.5	6.5	8.5	15.5	11.5	13.5
5	3.0	.5	1.5	4.0	.5	2.0	14.5	9.5	12.0	11.5	10.5	11.0
6	2.0	.5	1.0	4.5	.5	2.0	11.0	8.5	9.5	12.0	10.5	11.0
7	2.0	.5	1.0	4.5	.5	2.5	13.5	8.5	11.0	16.5	11.0	14.0
8	3.0	.5	1.5	3.0	2.0	2.5	14.5	10.0	12.0	15.0	13.0	13.5
9	3.0	.5	1.5	5.0	2.0	3.5	13.5	8.0	11.0	17.5	13.0	15.0
10	2.5	.5	1.5	5.5	4.5	5.0	---	---	---	16.5	13.5	15.5
11	3.0	.5	1.5	8.0	3.0	5.5	13.5	13.5	13.5	19.5	12.5	16.0
12	3.5	.5	2.0	9.0	5.0	7.0	16.5	11.0	14.0	19.0	14.0	16.5
13	4.0	1.0	2.5	8.5	4.0	6.0	16.5	12.0	14.5	16.5	15.0	16.0
14	4.0	2.0	3.0	5.5	2.0	4.0	15.0	11.0	13.0	16.5	15.5	16.0
15	4.0	.5	2.5	6.0	2.0	3.5	13.5	9.5	12.0	15.5	14.0	14.5
16	3.5	.5	2.0	3.0	2.5	2.5	13.5	9.0	11.5	14.0	13.5	13.5
17	5.0	3.0	3.5	6.5	2.5	4.5	13.0	9.0	11.5	15.5	13.5	14.5
18	3.5	2.5	3.0	7.0	3.0	4.5	14.5	9.0	12.0	16.0	14.0	15.0
19	4.5	1.5	3.0	9.0	3.5	5.5	13.0	10.5	11.5	20.0	14.0	16.5
20	4.0	1.0	2.5	8.0	3.0	5.5	13.0	10.5	12.0	21.0	15.5	18.0
21	4.5	1.0	2.5	9.5	5.0	7.0	12.5	10.5	11.5	22.0	17.0	19.0
22	3.5	.5	2.0	9.5	6.0	8.0	16.0	10.0	12.5	20.0	14.5	17.5
23	3.5	.5	2.0	10.5	7.0	8.5	16.0	9.5	13.0	18.5	15.0	17.0
24	4.0	1.0	2.5	10.0	7.5	9.0	16.5	11.5	14.0	17.0	15.0	15.5
25	6.5	2.5	4.5	7.5	5.0	6.0	16.5	11.5	14.5	19.0	15.0	17.0
26	5.5	3.0	4.5	5.5	5.0	5.0	15.0	12.5	13.5	21.5	15.5	18.5
27	5.0	1.5	3.5	8.0	5.0	6.5	12.5	11.0	12.0	19.5	17.0	18.0
28	4.5	.5	3.0	10.5	6.5	8.5	16.5	9.5	13.0	21.0	16.5	18.5
29	---	---	---	11.5	7.5	9.0	18.0	11.5	15.0	19.5	17.5	18.5
30	---	---	---	10.5	6.5	8.5	18.5	14.0	16.0	22.5	17.0	19.5
31	---	---	---	10.5	6.5	8.5	---	---	---	23.0	19.0	21.0
MONTH	6.5	.5	2.5	11.5	.5	5.0	18.5	6.5	12.0	23.0	10.5	16.0

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.5	19.5	22.0	23.5	19.5	22.0	22.5	20.5	21.5	24.0	21.5	22.5
2	25.0	19.5	22.5	21.5	18.5	19.5	23.0	21.5	22.5	23.5	20.5	22.5
3	23.0	19.5	21.0	18.5	17.0	17.5	26.0	22.5	24.0	23.5	20.5	22.0
4	21.5	17.0	19.5	18.5	17.5	18.0	25.0	24.0	24.5	23.0	20.0	21.5
5	21.5	17.0	19.5	23.0	17.0	19.5	24.0	23.0	23.5	23.0	18.5	21.0
6	21.0	16.5	19.5	22.5	18.0	20.0	26.0	22.5	24.0	24.0	20.0	22.0
7	19.5	17.5	18.5	23.0	18.0	20.5	27.0	24.0	25.5	24.5	21.5	23.0
8	21.5	19.0	20.5	23.5	18.0	21.0	27.0	24.5	25.5	23.5	19.0	21.0
9	24.0	19.5	21.5	25.5	21.5	23.5	27.0	23.5	25.0	22.0	18.0	19.5
10	23.0	17.5	20.5	24.5	22.0	23.5	26.0	24.0	25.0	20.0	17.0	18.5
11	23.5	18.0	21.0	24.5	20.5	22.5	26.0	23.0	24.5	22.5	18.5	20.5
12	24.0	18.5	21.5	23.5	18.5	21.0	26.0	23.5	24.5	24.0	21.0	22.5
13	22.5	18.5	20.0	24.0	18.5	21.5	26.5	24.0	25.0	22.5	19.0	20.5
14	20.5	15.5	18.0	21.5	20.5	21.0	28.0	24.0	26.0	20.0	17.0	18.5
15	20.5	15.5	18.0	24.0	19.5	21.5	28.0	24.0	26.0	19.5	18.0	18.5
16	20.5	16.0	18.5	23.0	21.0	22.0	28.5	25.5	26.5	22.0	18.0	20.0
17	19.5	17.5	18.0	23.0	20.0	21.5	29.5	25.5	27.0	22.0	19.5	21.0
18	23.0	17.0	19.5	25.0	20.0	22.5	28.0	23.5	25.5	23.5	19.5	21.5
19	25.5	20.5	23.0	25.5	21.0	23.5	28.0	22.5	25.0	23.5	19.5	21.5
20	25.5	20.5	23.0	27.0	22.5	24.5	28.0	24.5	25.5	22.0	18.5	20.0
21	23.0	21.0	22.0	27.5	23.5	25.5	26.5	21.5	23.5	22.0	19.5	20.5
22	23.5	20.0	21.5	28.0	24.0	26.0	27.0	21.0	23.5	21.5	20.0	21.0
23	24.0	19.5	22.0	29.5	25.0	27.0	27.0	21.0	23.5	20.5	19.0	19.5
24	23.0	19.5	21.5	29.0	24.5	26.5	26.5	21.5	24.0	20.0	17.5	18.5
25	23.5	18.5	21.0	25.5	23.0	24.0	24.5	23.0	23.5	20.0	17.5	18.0
26	22.0	19.5	20.5	25.0	22.0	23.5	25.5	21.5	23.0	19.0	16.0	17.0
27	25.0	20.5	22.5	27.0	22.5	24.0	23.0	21.0	22.0	18.5	15.5	16.5
28	26.5	21.5	24.0	---	---	---	23.5	23.0	23.5	18.5	16.0	16.5
29	26.0	21.0	23.5	---	---	---	26.5	22.5	24.5	18.0	15.0	16.0
30	26.0	21.0	23.5	---	---	---	25.5	23.5	24.5	17.5	14.5	15.5
31	---	---	---	22.0	21.5	21.5	25.5	23.5	24.5	---	---	---
MONTH	26.5	15.5	21.0	29.5	17.0	22.5	29.5	20.5	24.5	24.5	14.5	20.0

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.3	7.2	7.7	12.4	8.3	10.1	11.1	9.6	10.6	---	---	---
2	9.1	7.2	7.9	10.3	7.3	8.6	10.0	9.6	9.7	---	---	---
3	10.0	7.3	8.5	9.3	6.4	7.6	---	---	---	12.9	11.9	12.4
4	10.4	8.0	8.8	9.3	6.8	7.7	---	---	---	13.4	12.8	13.1
5	10.6	7.8	8.9	9.6	7.0	7.8	---	---	---	13.2	12.4	12.8
6	10.3	7.7	8.6	9.2	7.0	8.0	---	---	---	12.7	11.8	12.3
7	11.0	7.7	9.1	8.2	6.2	7.1	---	---	---	12.1	11.8	11.9
8	11.3	8.3	9.3	8.7	6.3	6.8	12.3	11.7	12.0	12.0	11.2	11.7
9	8.7	7.7	8.2	7.1	6.7	6.9	12.2	11.0	11.6	11.2	11.2	---
10	10.1	8.7	9.3	8.6	6.8	8.0	11.9	10.8	11.5	---	---	---
11	10.7	8.4	9.4	10.1	8.6	9.3	11.9	10.6	11.4	---	---	---
12	10.2	8.2	8.9	10.6	10.0	10.4	12.1	10.6	11.5	---	---	---
13	10.7	8.1	9.1	11.2	10.6	10.9	12.0	10.6	11.4	---	---	---
14	10.0	8.4	9.1	11.6	11.1	11.4	---	---	---	---	---	---
15	10.5	9.1	9.7	11.5	11.0	11.3	---	---	---	---	---	---
16	10.4	8.1	9.3	11.4	10.8	11.1	13.0	11.3	12.1	11.8	11.4	11.6
17	10.2	8.7	9.6	10.9	9.6	10.5	12.9	11.3	12.0	11.9	9.6	11.6
18	10.8	8.9	10.0	11.6	10.0	11.0	12.7	10.5	11.6	9.6	9.2	9.3
19	10.8	8.8	9.7	12.5	11.1	11.7	---	---	---	9.9	9.5	9.7
20	11.1	9.2	9.9	12.8	11.1	11.9	---	---	---	9.9	9.6	9.8
21	11.3	9.1	10.0	11.8	10.5	11.3	---	---	---	9.9	9.3	9.6
22	11.2	8.7	9.8	11.8	10.4	10.9	11.5	10.7	11.4	9.8	9.4	9.6
23	11.2	8.6	9.7	11.5	10.6	11.1	11.7	10.5	11.2	---	---	---
24	11.4	8.7	9.7	11.5	10.5	10.9	11.6	10.4	11.0	---	---	---
25	12.2	8.7	10.1	11.8	10.4	11.0	11.4	10.1	10.8	---	---	---
26	9.9	8.1	8.9	11.0	10.5	10.8	11.3	10.1	10.9	---	---	---
27	9.9	7.2	8.4	11.5	10.6	11.1	11.5	10.5	11.1	---	---	---
28	10.5	6.9	8.0	11.9	10.8	11.3	11.5	10.3	11.2	---	---	---
29	10.9	7.3	8.8	11.9	11.0	11.4	---	---	---	---	---	---
30	11.7	8.1	9.6	11.6	10.9	11.3	---	---	---	10.5	10.4	10.4
31	12.6	8.8	10.2	---	---	---	---	---	---	10.5	10.4	10.5
MONTH	12.6	6.9	9.2	12.8	6.2	10.0	13.0	9.6	11.3	13.4	9.2	11.1

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTON, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13.0	11.4	12.1	11.7	9.9	10.9	13.7	7.3	10.0
2	---	---	---	13.3	11.5	12.3	11.8	9.9	10.9	14.3	7.2	10.0
3	13.5	13.1	13.3	13.4	11.5	12.5	12.4	10.7	11.6	14.6	6.9	10.1
4	13.8	13.2	13.4	13.6	12.1	12.7	12.3	10.3	11.4	13.8	6.9	9.8
5	13.7	13.2	13.5	13.8	12.1	12.9	11.5	9.9	10.6	11.6	8.3	9.7
6	13.4	13.0	13.2	13.8	12.3	12.9	12.1	10.0	11.0	12.1	8.8	10.1
7	13.3	13.0	13.2	13.9	12.2	12.9	12.0	9.7	10.8	13.2	7.3	10.3
8	13.6	12.6	13.1	13.8	12.2	12.8	12.0	9.7	10.7	11.3	7.3	9.0
9	13.0	12.6	12.8	13.7	11.5	12.7	12.3	9.9	11.0	10.5	7.4	8.8
10	12.9	12.5	12.7	13.2	11.2	12.0	---	---	---	9.5	7.9	8.7
11	12.9	12.4	12.7	13.6	10.5	12.0	12.9	9.5	11.3	10.7	7.6	9.1
12	12.9	12.2	12.6	13.3	10.3	11.5	13.3	9.0	10.9	10.8	7.3	8.9
13	12.6	11.8	12.3	13.2	10.5	11.6	13.5	8.9	10.9	9.5	7.3	8.3
14	12.2	11.7	11.9	12.3	10.8	11.6	13.3	9.0	11.0	8.1	7.4	7.8
15	12.6	11.8	12.2	12.4	11.6	12.1	13.7	9.2	11.2	9.0	7.9	8.6
16	12.7	11.9	12.3	12.4	12.2	12.3	13.9	9.5	11.4	9.4	8.5	9.1
17	12.3	11.6	12.0	12.6	11.7	12.1	13.3	8.8	11.0	8.5	6.9	7.9
18	12.4	11.6	12.0	12.6	11.7	12.1	13.5	8.4	10.7	7.8	6.1	7.2
19	12.6	11.6	12.0	12.3	11.1	11.8	11.1	8.4	9.5	---	---	---
20	12.9	11.8	12.3	12.6	11.1	11.9	10.5	9.1	9.6	---	---	---
21	12.7	11.8	12.2	11.6	10.3	11.1	12.0	9.1	10.2	9.6	7.9	8.7
22	12.7	11.9	12.3	11.3	10.2	10.7	12.6	8.6	10.4	10.0	8.0	8.9
23	12.7	11.8	12.2	11.0	9.7	10.4	12.8	8.5	10.4	10.4	8.1	9.1
24	12.6	11.5	12.1	12.0	9.8	10.8	13.5	8.5	10.5	9.0	8.2	8.6
25	12.3	10.7	11.6	12.4	11.1	11.8	14.2	8.0	10.8	10.3	8.3	9.1
26	12.5	10.7	11.6	11.9	11.6	11.8	14.0	8.0	10.5	10.4	7.8	9.1
27	13.1	11.1	12.1	11.8	10.9	11.4	14.2	8.7	10.9	10.1	7.8	8.8
28	13.2	11.4	12.3	11.7	10.7	11.2	14.1	7.8	10.8	10.3	7.8	8.9
29	---	---	---	11.7	10.6	11.1	14.3	7.1	10.4	9.5	7.6	8.5
30	---	---	---	12.0	10.8	11.4	14.2	7.1	10.0	10.4	7.1	8.7
31	---	---	---	12.0	10.7	11.4	---	---	---	10.7	6.8	8.5
MONTH	13.8	10.7	12.5	13.9	9.7	11.9	14.3	7.1	10.7	14.6	6.1	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.0	6.4	8.3	8.8	6.3	7.5	9.4	7.2	8.2	7.7	6.8	7.3
2	11.1	6.2	8.2	8.4	6.6	7.6	8.9	6.9	7.7	8.2	6.9	7.5
3	9.3	6.1	7.6	8.5	7.4	8.0	9.5	6.3	7.7	8.4	6.8	7.5
4	10.2	6.8	8.2	8.6	8.2	8.5	8.8	6.2	7.3	8.4	6.8	7.4
5	10.9	6.8	8.3	9.0	8.0	8.5	8.4	6.5	7.2	9.1	6.8	7.7
6	11.3	7.0	8.8	8.9	7.9	8.4	8.8	6.4	7.4	9.3	6.7	7.8
7	9.9	6.9	8.1	9.0	7.8	8.4	9.7	6.3	7.6	9.6	6.6	7.7
8	9.6	6.7	7.9	9.2	7.1	8.3	9.7	6.5	7.7	8.1	6.5	7.3
9	10.1	6.4	7.8	8.8	6.7	7.7	11.1	6.3	8.2	10.1	7.3	8.3
10	10.5	6.3	8.0	9.2	6.7	7.7	10.6	6.1	7.9	10.8	7.2	8.5
11	10.6	6.3	8.1	9.3	6.8	7.9	11.4	6.2	7.9	11.6	7.1	8.6
12	11.0	5.9	7.4	10.2	7.0	8.3	10.7	6.0	7.8	9.6	6.5	7.7
13	8.8	5.9	7.1	10.6	6.9	8.3	10.1	5.8	7.4	10.3	6.3	8.1
14	10.2	6.5	8.1	9.2	6.7	7.8	12.4	5.7	8.1	10.8	7.6	8.7
15	11.9	6.5	8.8	10.5	6.7	8.4	12.9	6.5	8.9	9.8	7.4	8.2
16	12.3	7.2	9.3	9.6	6.6	7.8	12.7	6.2	8.5	10.3	6.3	8.0
17	10.0	7.0	8.4	10.5	7.0	8.3	12.4	5.7	7.9	9.7	6.1	7.5
18	11.6	6.4	9.0	10.7	6.6	8.4	11.4	4.6	6.9	10.6	6.0	7.6
19	10.8	6.3	8.2	11.4	6.4	8.4	10.6	5.1	7.1	8.0	5.7	7.1
20	10.5	6.7	8.2	11.5	6.0	8.2	9.5	4.6	6.5	9.9	7.1	8.0
21	9.5	6.7	7.8	11.9	5.7	8.0	10.6	4.5	6.0	10.2	6.7	8.0
22	8.9	7.4	8.0	11.9	5.3	7.9	11.6	5.5	7.6	8.0	6.4	7.1
23	9.4	7.1	8.2	11.7	4.9	7.5	11.8	5.6	7.6	9.9	6.9	8.0
24	9.6	7.1	8.2	12.6	4.7	7.5	12.5	5.4	8.0	10.1	7.1	8.2
25	9.6	7.1	8.2	10.2	5.3	7.0	10.3	5.1	6.9	11.2	6.9	8.3
26	8.5	6.6	7.6	10.6	6.3	8.0	11.2	5.6	7.7	11.7	7.5	9.1
27	6.9	6.5	6.7	10.5	6.2	7.8	9.2	5.4	6.5	12.5	7.5	9.4
28	7.5	6.3	6.9	---	---	---	7.2	7.0	7.1	11.3	6.8	8.5
29	8.1	6.3	7.1	---	---	---	7.6	6.6	7.1	11.8	7.3	9.0
30	8.1	6.3	7.1	---	---	---	7.9	6.6	7.2	12.0	7.3	9.1
31	---	---	---	8.9	8.0	8.4	7.7	6.5	7.0	---	---	---
MONTH	12.3	5.9	8.0	12.6	4.7	8.0	12.9	4.5	7.5	12.5	5.7	8.0

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, Hydrologic Unit 02040205, on left bank 27 ft (8 m) upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft (46 m) upstream from Harvey Run and 1,200 ft (370 m) downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 mi^2 (743 km^2), including that of Harvey Run.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD--August 1911 to December 1953, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1919-20, 1932-33, 1936, 1938(P), 1942, (maximum only, 1917-18, 1922-31, 1934, 1939, 1944-46). WDR PA-72: 1971.

GAGE.--Water-stage recorder. Datum of gage is 150.45 ft (45.857 m) National Geodetic Vertical Datum of 1929. Prior to May 21, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated by Marsh Creek Reservoir (see p. 263) about 17 mi (27 km) upstream.

AVERAGE DISCHARGE.--58 years, (1911-53, 1962-78), 393 ft^3/s (11.1 m^3/s), 18.60 in/yr (472 mm/yr), adjusted for storage since November 1973.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft^3/s (674 m^3/s) June 22, 1972, gage height, 16.56 ft (5.047 m) from rating curve extended above 9,000 ft^3/s (255 m^3/s) on basis of area-velocity study; minimum, 4.9 ft^3/s (0.14 m^3/s) Oct. 2, 1941, gage height, 0.28 ft (0.085 m); minimum daily, 42 ft^3/s (1.19 m^3/s) Sept. 12, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,700 ft^3/s (445 m^3/s) Jan. 26, gage height, 14.11 ft (4.301 m); minimum, 118 ft^3/s (3.34 m^3/s) Oct. 5, 6, 8, gage height, 1.44 ft (0.439 m); minimum daily, 137 ft^3/s (3.88 m^3/s) Oct. 5, 6, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	168	1250	570	865	425	925	390	455	314	366	680
2	181	172	660	555	810	400	845	380	430	304	328	440
3	160	202	505	510	755	420	780	380	440	1780	300	366
4	141	323	460	470	705	420	810	385	590	2640	290	342
5	137	241	460	475	660	380	925	505	470	735	356	300
6	137	219	615	485	650	380	750	450	440	590	405	268
7	141	1180	470	500	600	380	805	430	425	510	318	259
8	137	2300	385	630	680	385	715	410	475	455	295	268
9	342	700	400	3470	625	380	645	815	455	390	263	272
10	371	510	352	975	575	390	625	930	405	371	304	246
11	215	705	333	765	570	435	605	615	385	361	281	232
12	177	465	328	665	565	680	585	550	366	337	371	246
13	172	395	347	705	595	1160	540	540	435	323	333	272
14	177	352	520	1550	590	2820	505	2710	390	328	318	224
15	500	333	875	775	505	4620	490	1720	347	356	263	228
16	337	318	505	600	495	1990	485	1270	333	347	254	241
17	535	342	430	635	500	1100	475	1250	342	347	241	241
18	352	455	2680	2030	480	970	470	1370	352	323	232	224
19	263	347	3840	1020	470	1240	660	1060	337	300	228	500
20	246	314	1230	855	450	1600	990	875	323	290	228	323
21	219	304	2200	810	440	1310	695	775	450	286	224	237
22	202	318	1360	725	435	1440	595	695	780	281	219	237
23	193	755	960	665	430	1030	550	660	385	277	215	237
24	181	520	865	630	435	910	525	850	347	246	202	228
25	177	410	1040	2050	435	790	455	790	328	272	193	215
26	193	1260	860	10600	455	1960	440	645	318	300	206	206
27	241	560	660	4190	440	4880	435	600	1490	342	500	202
28	224	440	630	1620	425	1750	435	590	525	1150	4490	202
29	193	420	575	1290	---	1290	410	570	366	337	1010	193
30	181	465	570	1090	---	1090	405	540	337	290	440	193
31	172	---	585	970	---	1000	---	475	---	337	450	---
TOTAL	7061	15493	26950	42880	15640	38025	18575	24225	13521	15519	14123	8322
MEAN	228	516	869	1383	559	1227	619	781	451	501	456	277
MAX	535	2300	3840	10600	865	4880	990	2710	1490	2640	4490	680
MIN	137	168	328	470	425	380	405	380	318	246	193	193
MEAN≠	227	521	870	1384	550	1235	609	778	455	502	462	269
CFSM≠	.79	1.82	3.03	4.82	1.92	4.30	2.12	2.71	1.59	1.75	1.61	.94
IN.≠	.91	2.03	3.49	5.56	2.00	4.96	2.37	3.12	1.77	2.02	1.86	1.05

CAL YR 1977 TOTAL 137034 MEAN 375 MAX 3840 MIN 103 MEAN≠ 376 CFSM≠ 1.31 IN.≠ 17.77
WTR YR 1978 TOTAL 240334 MEAN 658 MAX 10600 MIN 137 MEAN≠ 658 CFSM≠ 2.29 IN.≠ 31.14

≠ Adjusted for change in contents in Marsh Creek Reservoir.

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1965 to current year.
pH: October 1965 to September 1966, December 1971 to current year.
WATER TEMPERATURES: October 1964 to current year.
DISSOLVED OXYGEN: October 1971 to current year.
SUSPENDED SEDIMENT DISCHARGE: July 1963 to current year.

REMARKS.--Unpublished records of specific conductance, pH, and temperature of sediment samples available in the district office at Harrisburg. Sediment data from 01481500 Brandywine Creek at Wilmington, Del., are used in computation of sediment records.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 445 micromhos Oct. 25, 1971; minimum, 71 micromhos June 23, 1972.
pH: Maximum, 9.8 Apr. 9, 1975; minimum, 6.1 Feb. 22, 1976.
WATER TEMPERATURES: Maximum, 31.0°C Jul. 18, 19, 1977; minimum daily, freezing point on many days during winter months.
DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 5, 1976; minimum 4.7 mg/L July 10, 1975.
SEDIMENT CONCENTRATIONS: Maximum daily, 2,000 mg/L (estimated) Feb. 8, 1965; minimum daily, 1 mg/L on many days.
SEDIMENT DISCHARGES: Maximum daily, 20,100 tons (18,200 tonnes) Jan. 26, 1978; minimum daily, 0 ton (0 tonne) on Oct. 7, 8, 1967.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 271 micromhos Oct. 2; minimum, 89 micromhos Dec. 19.
pH: Maximum, 9.0 Apr. 30, May 3, 4, July 21, 22; minimum, 6.6 June 27, July 3, 4.
WATER TEMPERATURES: Maximum, 28.5°C July 23; minimum, 0.5°C Feb. 5.
DISSOLVED OXYGEN: Maximum, 15.2 mg/L Dec. 11, 12; minimum, 5.3 mg/L Aug. 31.
SEDIMENT CONCENTRATIONS: Maximum daily, 765 mg/L Mar. 14; minimum daily, 2 mg/L Feb. 25, 26, 28, Mar. 9, 10, May 2, 3.
SEDIMENT DISCHARGES: Maximum daily, 20,100 tons (18,200 tonnes) Jan. 26; minimum daily, 2.0 tons (1.8 tonnes) Sept. 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	CAR-BONATE (MG/L AS CO3)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
06...	0900	125	248	7.4	14.5	9.9	8333	--	4.9
13...	1000	168	236	7.4	13.0	9.6	1200	--	8.2
19...	1145	254	222	7.3	11.0	10.3	2400	--	7.9
25...	1130	181	240	7.4	11.5	10.6	320	--	6.0
27...	1330	246	240	7.3	15.0	9.4	--	0	--
NOV									
02...	0630	168	240	7.4	12.5	9.9	400	--	3.7
10...	1000	505	210	7.1	15.5	10.1	40	--	12
17...	1000	318	219	7.2	11.0	11.3	40	--	8.5
30...	1730	465	229	7.3	6.5	13.1	E60	--	9.0
DEC									
08...	2100	395	210	7.2	3.0	14.8	E80	--	12
19...	1230	2660	120	6.9	4.3	12.8	E100	--	11
28...	1630	585	175	7.4	2.0	12.3	650	--	9.9
JAN									
02...	1400	550	184	7.4	4.0	11.8	340	--	9.3
09...	1100	4870	103	6.9	7.0	11.1	6600	--	23
16...	1130	580	178	7.0	1.5	12.6	3091	--	11
22...	1030	715	111	7.1	2.0	11.7	900	--	7.9
30...	1400	1040	--	6.9	3.0	11.8	4400	0	8.6
FEB									
08...	1500	685	111	7.0	1.0	12.1	369	--	1.6
13...	1300	565	121	6.9	2.0	11.8	103	--	5.2
20...	1400	440	117	7.2	2.0	12.1	328	0	4.0
27...	1430	445	142	7.3	4.0	11.8	57	--	3.3
MAR									
06...	1430	380	170	7.4	2.5	14.3	211	--	9.7
13...	1400	820	205	7.0	6.5	11.9	781	--	2.9
20...	1400	1220	150	6.7	6.0	12.5	830	--	1.5
27...	1330	4850	133	7.0	7.0	11.7	5625	--	16
APR									
03...	1430	760	180	7.3	8.0	12.4	242	--	3.0
10...	1500	610	186	7.7	12.0	11.4	60	--	9.3
17...	1330	480	184	8.5	11.0	11.9	39	--	10
24...	0900	530	200	7.1	12.5	9.2	54	--	8.5
MAY									
01...	1330	390	209	8.5	14.0	11.8	21	--	8.7
08...	1330	405	204	7.7	13.1	10.6	154	--	8.3
14...	1020	2860	--	--	15.0	--	--	--	--
15...	1300	1610	156	6.9	14.0	8.9	10270	--	8.1
21...	1130	780	192	7.1	19.0	8.5	279	--	5.9
30...	1300	535	198	7.2	20.0	8.7	162	--	8.2
JUN									
05...	1300	440	197	7.3	19.5	8.9	123	--	5.6
13...	1100	420	211	7.1	21.0	7.4	888	--	5.0
19...	1130	337	218	7.3	22.0	9.1	--	--	9.1
26...	1300	314	236	7.2	21.0	8.0	583	--	--

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	CARBON, ORGANIC TOTAL (MG/L AS C)
JUL								
03...	1430	1060	202	7.2	18.0	8.4	5460	8.3
14...	0730	323	231	7.4	21.5	7.7	--	2.3
17...	1300	342	221	--	21.5	8.2	1215	7.8
24...	1400	250	234	8.1	27.5	8.4	114	5.4
31...	1325	361	219	7.5	22.0	7.5	2708	2.9
AUG								
07...	1330	309	205	7.5	25.0	8.1	2385	2.5
14...	1330	319	228	7.5	25.5	8.5	415	2.9
21...	1430	224	243	8.0	25.5	9.5	75	--
28...	1230	5050	98	7.0	22.0	7.1	41500	17
SEP								
05...	1430	295	223	7.6	22.0	8.8	269	3.9
11...	1330	241	230	7.9	21.0	10.0	103	--
18...	1130	206	237	7.5	21.5	8.9	869	2.5
25...	1430	224	255	7.9	19.0	10.1	772	--

DATE	TIME	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT												
27...	1330	87	33	21	8.3	11	3.5	65	0	53	5.2	25

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)
OCT												
27...	17	.1	11	139	129	2.2	.03	2.2	.06	.40	.46	2.7

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
27...	.28	.23	0	1	0	3	160	10	70	6	10

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	266	244	252	247	234	240	209	152	177	188	175	181
2	271	247	260	247	239	243	190	166	179	192	175	180
3	247	241	244	245	235	241	203	191	198	222	185	199
4	247	235	241	239	223	231	208	204	207	189	177	182
5	253	245	248	234	224	228	210	201	205	184	174	179
6	254	248	251	244	234	240	207	193	200	182	175	179
7	262	251	255	236	168	195	207	192	201	188	176	183
8	260	250	254	177	125	150	211	204	207	181	175	178
9	263	223	249	204	178	194	216	211	214	182	98	125
10	225	189	196	213	204	210	265	214	236	147	117	134
11	221	190	206	211	193	203	239	221	227	155	141	148
12	234	223	228	213	191	204	227	216	221	159	147	152
13	245	234	239	218	213	216	217	208	212	157	148	152
14	249	243	247	220	216	218	213	197	207	220	145	168
15	247	190	222	224	216	220	218	180	191	186	156	170
16	200	190	195	224	218	222	196	186	192	178	154	159
17	---	---	---	222	219	221	206	195	199	170	126	152
18	---	---	---	223	200	212	201	98	152	196	105	148
19	229	218	224	220	200	209	148	89	120	149	119	133
20	231	228	229	226	220	224	172	149	163	120	110	113
21	235	229	232	229	224	227	175	134	155	112	110	111
22	243	234	237	---	---	---	166	142	157	127	110	116
23	251	244	247	---	---	---	179	166	173	122	111	116
24	245	237	241	---	---	---	178	174	176	127	112	118
25	245	239	243	---	---	---	178	166	175	153	125	131
26	246	241	243	---	---	---	175	165	168	---	---	---
27	248	232	240	---	---	---	178	169	172	---	---	---
28	233	226	230	204	201	203	182	174	177	---	---	---
29	243	230	237	211	205	209	186	178	181	---	---	---
30	245	241	243	229	209	216	187	179	182	---	---	---
31	250	242	246	---	---	---	188	179	183	---	---	---
MONTH	271	189	237	247	125	216	265	89	187	222	98	152

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	153	131	150	180	175	178	212	203	207
2	---	---	---	153	131	142	183	180	181	208	203	206
3	---	---	---	182	168	176	182	179	180	210	204	207
4	---	---	---	181	168	174	185	179	182	210	203	207
5	---	---	---	211	176	189	186	176	181	205	200	202
6	---	---	---	204	170	182	185	177	183	202	196	199
7	---	---	---	178	150	166	187	180	183	204	195	199
8	118	111	114	187	171	178	184	180	182	204	193	200
9	124	114	120	208	189	198	190	183	187	200	176	188
10	132	118	123	218	209	214	189	183	186	182	157	166
11	128	116	121	219	212	215	190	183	186	195	175	189
12	127	116	122	227	204	220	192	185	188	204	194	200
13	127	115	122	212	166	197	194	188	191	204	201	202
14	127	122	124	179	113	150	196	189	193	201	115	148
15	148	121	134	130	105	116	195	192	194	163	133	152
16	145	123	133	157	113	133	199	192	195	179	163	173
17	141	131	136	189	158	181	198	181	190	179	167	173
18	139	130	134	204	188	195	184	179	182	178	168	175
19	131	121	128	191	151	183	184	177	181	186	179	184
20	125	111	116	160	130	142	176	162	167	190	184	187
21	123	108	116	167	151	157	174	162	170	192	190	191
22	122	110	116	164	151	156	182	174	177	193	188	191
23	123	108	116	172	165	168	184	178	181	197	190	193
24	122	105	115	179	174	177	200	182	192	192	180	188
25	132	116	125	182	176	179	207	196	202	186	182	184
26	147	125	135	185	131	173	209	202	206	193	185	190
27	145	124	136	141	120	129	209	203	207	196	192	194
28	138	124	132	167	142	158	210	203	207	200	194	197
29	---	---	---	173	168	171	207	200	203	200	197	199
30	---	---	---	180	173	177	211	200	206	198	192	196
31	---	---	---	178	173	176	---	---	---	207	195	202
MONTH	148	105	125	227	105	172	211	162	188	212	115	190

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	210	204	206	235	228	231	---	---	---	217	185	199
2	209	204	207	235	230	233	216	212	215	210	185	201
3	206	202	204	236	97	190	222	215	218	223	210	218
4	213	197	201	168	96	133	224	220	222	229	222	225
5	201	194	198	197	169	186	224	215	220	228	222	225
6	204	195	200	205	193	200	214	198	206	230	223	227
7	208	202	205	211	204	207	212	200	205	229	223	225
8	209	201	206	212	207	210	222	207	216	233	222	226
9	208	202	205	227	211	220	224	220	222	238	233	235
10	210	203	206	227	223	225	227	213	222	235	230	232
11	215	208	212	225	221	223	221	209	217	234	227	231
12	214	208	212	229	222	226	228	180	207	234	228	232
13	213	208	211	228	225	227	227	186	207	229	219	223
14	212	201	207	232	225	228	232	201	217	229	224	226
15	216	209	213	229	227	228	227	210	220	234	226	230
16	220	214	217	230	224	227	235	227	231	241	231	237
17	219	215	217	226	218	221	240	233	238	236	228	231
18	220	213	217	225	218	222	242	236	239	243	234	238
19	219	213	216	227	221	225	248	239	243	239	190	218
20	219	213	215	230	224	227	248	241	244	206	174	188
21	220	166	213	233	228	230	250	239	243	228	208	219
22	186	154	173	238	231	234	253	238	245	239	229	234
23	210	187	202	239	235	237	252	243	247	245	239	242
24	221	211	217	240	230	235	249	242	246	252	242	248
25	228	221	224	235	229	232	253	242	246	256	245	251
26	236	225	230	238	218	229	254	243	250	253	244	249
27	230	119	170	222	220	221	251	118	222	252	245	249
28	197	158	176	---	---	---	155	97	122	253	244	249
29	224	199	212	---	---	---	183	144	161	253	243	248
30	233	223	227	---	---	---	209	185	200	252	245	248
31	---	---	---	---	---	---	214	209	211	---	---	---
MONTH	236	119	207	240	96	219	254	97	220	256	174	230

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.3	7.3	7.5	7.4	7.4	7.3	7.1	7.2	7.3	7.3	7.3
2	7.4	7.3	7.3	7.4	7.3	7.4	7.2	7.1	7.2	7.4	7.3	7.3
3	7.5	7.3	7.4	7.3	7.2	7.3	7.3	7.2	7.3	7.4	7.4	7.4
4	7.6	7.4	7.5	7.3	7.1	7.2	7.4	7.3	7.4	7.4	7.3	7.4
5	7.7	7.4	7.5	7.3	7.1	7.2	7.4	7.3	7.3	7.4	7.3	7.4
6	7.6	7.4	7.5	7.3	7.2	7.3	7.4	7.3	7.3	7.3	7.3	7.3
7	7.7	7.4	7.5	7.3	7.0	7.1	7.5	7.3	7.4	7.3	7.3	7.3
8	7.7	7.4	7.5	7.0	6.7	6.9	7.4	7.2	7.4	7.3	7.3	7.3
9	7.5	7.3	7.4	7.1	7.0	7.1	7.5	7.3	7.4	7.3	6.9	7.1
10	7.3	7.2	7.3	7.2	7.1	7.2	7.5	7.4	7.5	7.4	7.2	7.3
11	7.4	7.2	7.3	7.3	7.2	7.2	7.5	7.4	7.4	7.4	7.3	7.4
12	7.5	7.3	7.4	7.3	7.2	7.3	7.5	7.4	7.4	7.4	7.3	7.4
13	7.5	7.4	7.5	7.4	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4
14	7.5	7.4	7.4	7.4	7.4	7.4	7.4	7.2	7.3	7.4	7.2	7.3
15	7.5	7.3	7.4	7.4	7.3	7.3	7.2	7.2	7.2	7.4	7.3	7.4
16	7.3	7.2	7.3	7.3	7.3	7.3	7.3	7.1	7.3	7.4	7.0	7.3
17	---	---	---	7.3	7.1	7.3	7.3	7.3	7.3	7.3	7.2	7.2
18	---	---	---	7.4	7.3	7.3	7.3	6.7	7.1	7.1	6.9	7.0
19	7.4	7.2	7.3	7.4	7.3	7.4	7.0	6.7	6.9	7.2	7.0	7.1
20	7.4	7.3	7.4	7.4	7.4	7.4	7.2	7.0	7.1	7.0	7.0	7.0
21	7.4	7.3	7.4	7.4	7.3	7.4	7.2	7.1	7.1	7.1	7.0	7.0
22	7.4	7.3	7.4	---	---	---	7.2	7.0	7.1	7.1	6.8	7.0
23	7.5	7.3	7.4	---	---	---	7.3	7.2	7.2	6.9	6.8	6.9
24	7.5	7.3	7.4	---	---	---	7.3	7.3	7.3	6.9	6.8	6.8
25	7.5	7.4	7.4	---	---	---	7.3	7.2	7.3	6.8	6.8	6.8
26	7.4	7.3	7.4	---	---	---	7.3	7.2	7.3	---	---	---
27	7.3	7.2	7.3	---	---	---	7.4	7.3	7.3	---	---	---
28	7.3	7.2	7.2	7.3	7.0	7.3	7.4	7.4	7.4	---	---	---
29	7.4	7.2	7.3	7.3	7.3	7.3	7.4	7.2	7.3	---	---	---
30	7.5	7.3	7.4	7.3	7.2	7.3	7.3	7.2	7.3	7.1	6.9	7.0
31	7.5	7.4	7.4	---	---	---	7.3	7.2	7.3	7.1	7.1	7.1
MONTH	7.7	7.2	7.4	7.5	6.7	7.3	7.5	6.7	7.3	7.4	6.8	7.2

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.2	7.1	7.1	7.5	7.2	7.3	7.3	7.1	7.2	8.9	8.1	8.6
2	7.2	7.1	7.1	7.5	7.3	7.4	7.5	7.1	7.3	8.9	8.1	8.6
3	7.2	7.1	7.2	7.5	7.2	7.4	7.4	7.1	7.3	9.0	8.0	8.6
4	7.3	7.2	7.2	7.6	7.3	7.4	7.5	7.2	7.3	9.0	8.2	8.5
5	7.2	7.2	7.2	7.5	7.4	7.5	7.4	7.2	7.3	8.2	7.2	7.5
6	7.2	7.2	7.2	7.5	7.3	7.4	7.6	7.2	7.3	7.9	7.2	7.5
7	7.2	7.1	7.2	7.6	7.3	7.5	7.8	7.2	7.4	8.6	7.3	8.0
8	7.2	7.0	7.2	7.6	7.3	7.5	8.1	7.2	7.6	8.5	7.2	7.8
9	7.2	7.1	7.1	7.6	7.3	7.5	8.2	7.2	7.7	7.4	7.1	7.3
10	7.2	7.1	7.2	7.6	7.3	7.5	8.5	7.2	7.8	7.2	7.0	7.1
11	7.2	7.1	7.2	7.8	7.3	7.5	8.5	7.3	7.9	7.8	7.1	7.4
12	7.2	7.2	7.2	7.6	7.2	7.3	8.6	7.3	8.0	8.0	7.1	7.5
13	7.2	6.9	7.2	7.2	7.0	7.1	8.8	7.3	8.1	7.6	7.2	7.4
14	7.2	7.1	7.2	7.1	6.8	7.0	8.7	7.3	8.2	7.3	6.8	6.9
15	7.2	7.2	7.2	6.9	6.8	6.9	8.7	7.5	8.2	7.0	6.8	6.9
16	7.2	7.1	7.2	7.1	6.9	7.0	8.7	7.5	8.2	7.1	7.0	7.1
17	7.2	7.2	7.2	7.2	7.1	7.1	8.9	7.5	8.3	7.1	7.0	7.1
18	7.2	7.2	7.2	7.2	7.1	7.2	8.9	7.5	8.3	7.1	7.0	7.1
19	7.3	7.2	7.2	7.2	7.0	7.1	8.7	7.3	7.6	7.2	7.1	7.1
20	7.3	7.1	7.2	7.1	6.7	6.9	7.3	7.1	7.3	7.3	7.1	7.2
21	7.3	7.2	7.3	7.2	7.0	7.1	7.8	7.2	7.5	7.4	7.1	7.3
22	7.4	7.3	7.3	7.1	7.0	7.1	8.3	7.2	7.7	7.5	7.2	7.3
23	7.4	7.3	7.3	7.2	7.1	7.1	8.5	7.3	7.9	7.5	7.1	7.3
24	7.4	7.3	7.3	7.3	7.0	7.2	8.7	7.1	8.0	7.4	7.1	7.2
25	7.4	7.2	7.3	7.3	7.2	7.2	8.7	7.4	8.2	7.4	7.1	7.2
26	7.4	7.3	7.3	7.2	6.9	7.1	8.6	7.4	8.2	7.5	7.1	7.3
27	7.4	7.0	7.3	7.0	6.8	6.9	8.7	7.4	8.2	7.4	7.1	7.2
28	7.4	7.3	7.3	7.1	6.9	7.0	8.8	7.6	8.4	7.5	7.2	7.3
29	---	---	---	7.2	7.0	7.1	8.9	7.7	8.4	7.4	7.1	7.3
30	---	---	---	7.2	7.1	7.1	9.0	7.7	8.5	7.6	7.1	7.3
31	---	---	---	7.3	7.1	7.2	---	---	---	7.6	7.1	7.3
MONTH	7.4	6.9	7.2	7.8	6.7	7.2	9.0	7.1	7.8	9.0	6.8	7.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.1	7.4	7.4	7.2	7.3	---	---	---	7.3	7.3	7.3
2	7.8	7.2	7.5	7.3	7.2	7.2	7.5	7.4	7.4	7.4	7.3	7.3
3	7.5	7.1	7.3	7.3	6.6	7.1	7.6	7.3	7.4	7.5	7.3	7.4
4	7.4	7.1	7.2	6.9	6.6	6.7	7.5	7.4	7.5	7.6	7.4	7.5
5	7.7	7.1	7.4	7.1	6.9	7.0	7.5	7.4	7.4	7.7	7.4	7.6
6	7.6	7.1	7.4	7.2	7.0	7.1	7.5	7.3	7.4	7.8	7.4	7.6
7	7.4	7.2	7.3	7.3	7.1	7.2	7.7	7.3	7.5	8.0	7.5	7.7
8	7.3	7.1	7.2	7.3	7.1	7.2	7.8	7.5	7.6	7.9	7.5	7.6
9	7.5	7.1	7.3	7.5	7.1	7.2	7.9	7.5	7.7	7.9	7.4	7.7
10	7.6	7.2	7.3	7.5	7.1	7.3	7.8	7.5	7.6	8.0	7.6	7.8
11	7.6	7.2	7.4	7.8	7.2	7.5	7.8	7.4	7.6	8.3	7.6	7.9
12	7.7	7.2	7.4	8.0	7.3	7.6	7.7	7.3	7.5	8.4	7.7	8.0
13	7.4	7.1	7.3	8.3	7.3	7.8	7.6	7.3	7.5	8.0	7.5	7.7
14	7.7	7.1	7.4	8.1	7.4	7.7	7.8	7.4	7.5	8.1	7.5	7.8
15	7.9	7.1	7.4	---	---	---	7.9	7.4	7.6	8.0	7.6	7.8
16	7.9	7.3	7.5	---	---	---	8.0	7.4	7.7	8.2	7.5	7.8
17	7.6	7.2	7.3	7.9	7.8	7.9	8.0	7.5	7.7	8.1	7.5	7.8
18	7.7	7.2	7.4	8.4	7.5	7.9	8.0	7.4	7.7	8.2	7.5	7.8
19	7.7	7.2	7.4	8.7	7.7	8.2	8.1	7.5	7.7	7.9	7.4	7.5
20	7.7	7.2	7.4	8.8	7.9	8.4	8.1	7.5	7.8	7.6	7.4	7.5
21	7.5	7.0	7.3	9.0	7.9	8.5	8.2	7.6	7.9	7.8	7.4	7.6
22	7.1	7.0	7.0	9.0	8.0	8.5	8.2	7.6	7.9	7.6	7.4	7.5
23	7.4	7.1	7.2	8.9	7.9	8.4	8.2	7.6	7.9	7.8	7.5	7.6
24	7.4	7.2	7.3	8.5	7.9	8.2	8.4	7.6	8.0	7.8	7.5	7.7
25	7.4	7.2	7.3	8.0	7.5	7.7	8.1	7.6	7.8	7.9	7.6	7.7
26	7.4	7.2	7.3	8.0	7.4	7.7	8.2	7.5	7.8	7.9	7.6	7.8
27	7.2	6.6	6.9	7.8	7.5	7.6	7.9	6.9	7.5	8.0	7.6	7.8
28	7.0	6.8	6.9	---	---	---	7.0	6.8	6.9	8.1	7.6	7.9
29	7.2	7.0	7.1	---	---	---	7.2	7.0	7.1	8.1	7.7	7.9
30	7.3	7.1	7.2	---	---	---	7.3	7.2	7.2	8.1	7.7	7.9
31	---	---	---	---	---	---	7.4	7.3	7.3	---	---	---
MONTH	7.9	6.6	7.3	9.0	6.6	7.6	8.4	6.8	7.6	8.4	7.3	7.7

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	18.0	18.0	12.0	10.0	11.0	8.0	7.0	7.5	5.5	4.0	4.5
2	19.5	18.0	18.5	14.5	12.0	13.0	8.5	7.5	8.0	4.0	3.5	3.5
3	19.0	16.5	17.5	16.0	14.5	15.5	8.0	7.0	7.5	3.5	1.5	2.5
4	16.0	15.0	15.5	18.0	16.0	17.0	7.0	6.5	7.0	1.5	1.0	1.5
5	16.0	14.0	15.0	19.0	18.0	18.5	6.5	6.0	6.0	3.5	1.5	2.0
6	15.5	14.5	15.0	18.5	16.5	17.5	7.0	5.5	6.5	6.0	3.5	4.5
7	15.0	13.0	14.0	16.5	14.5	15.5	5.5	3.0	4.0	6.0	6.0	6.0
8	14.0	13.0	13.5	14.5	14.0	14.0	3.0	2.0	2.5	7.5	6.0	6.5
9	15.5	13.5	14.5	15.5	14.5	15.0	4.0	3.0	3.5	8.5	3.0	6.0
10	15.5	14.0	14.5	16.0	15.5	15.5	3.0	1.0	1.5	2.5	1.0	1.5
11	14.0	13.0	13.5	15.5	11.0	13.0	1.5	1.0	1.5	1.0	1.0	1.0
12	14.5	13.5	14.0	11.0	9.0	9.5	1.5	1.0	1.0	2.0	1.0	1.5
13	14.0	13.0	13.5	9.0	7.0	7.5	3.0	1.0	2.0	3.0	2.5	2.5
14	13.5	11.5	12.5	6.5	5.5	6.5	6.5	3.0	4.5	3.0	3.0	3.0
15	12.5	11.0	11.5	8.0	6.5	7.5	7.0	6.0	6.5	3.0	2.0	2.5
16	13.5	11.5	12.5	10.0	7.5	8.5	6.0	5.0	5.5	2.0	1.0	1.5
17	---	---	---	12.0	10.0	11.0	5.5	4.5	5.0	2.0	2.0	2.0
18	---	---	---	12.0	9.5	10.5	5.5	3.5	5.0	3.5	2.0	3.0
19	12.0	11.0	11.5	9.0	8.0	8.0	5.5	3.5	4.5	3.0	2.0	2.5
20	13.0	11.5	12.0	8.0	7.0	7.5	6.5	5.5	5.5	2.5	1.0	1.5
21	13.0	11.5	12.5	9.5	8.0	8.5	7.5	6.5	7.0	3.0	1.5	2.5
22	13.0	11.5	12.5	---	---	---	6.5	5.5	6.0	3.5	2.0	3.0
23	13.5	12.0	13.0	---	---	---	5.5	4.5	5.0	3.0	2.0	2.5
24	13.0	11.5	12.5	---	---	---	6.5	5.0	5.5	3.5	1.5	2.5
25	12.5	11.0	12.0	---	---	---	8.0	6.5	7.0	3.5	3.0	3.0
26	13.0	12.0	12.5	---	---	---	6.5	2.5	4.0	---	---	---
27	16.0	13.5	14.5	---	---	---	2.0	1.5	1.5	---	---	---
28	17.5	16.0	17.0	6.0	5.5	6.0	2.0	1.0	1.5	---	---	---
29	17.0	15.0	16.0	6.0	5.5	5.5	2.5	1.0	1.5	---	---	---
30	14.5	12.5	13.5	7.0	6.0	6.5	4.0	2.0	3.0	3.0	2.5	3.0
31	12.5	11.0	11.5	---	---	---	6.0	4.0	5.0	2.5	2.0	2.0
MONTH	19.5	11.0	14.0	19.0	5.5	11.0	8.5	1.0	4.5	8.5	1.0	3.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	1.5	2.0	4.5	3.0	3.5	13.0	9.5	11.0	15.5	13.0	14.0
2	3.0	2.0	2.5	4.0	2.5	3.5	13.0	11.0	12.0	15.5	12.0	14.0
3	3.0	2.0	2.5	4.0	1.5	2.5	11.0	7.5	8.5	16.5	13.0	15.0
4	2.5	1.5	2.0	2.5	1.0	2.0	10.5	7.0	8.5	16.0	12.5	14.0
5	1.5	.5	1.0	2.5	1.0	2.0	13.5	10.5	12.0	12.0	10.5	11.0
6	1.5	1.0	1.0	2.5	1.0	2.0	12.5	10.0	11.0	11.0	10.0	10.5
7	1.0	1.0	1.0	3.5	1.0	2.0	12.5	9.5	10.5	14.5	11.0	12.5
8	1.0	1.0	1.0	3.5	2.5	3.0	13.5	11.5	12.5	14.5	13.0	13.5
9	1.5	1.0	1.0	4.0	2.5	3.0	12.5	10.0	11.5	16.0	12.5	14.0
10	1.5	1.0	1.0	5.0	4.0	4.5	12.5	10.0	11.5	16.0	15.0	15.5
11	1.5	1.0	1.0	6.5	4.0	5.5	13.0	11.5	12.5	17.5	13.5	15.5
12	2.0	1.0	1.5	8.0	5.5	7.0	15.0	12.0	13.5	18.0	15.5	17.0
13	2.5	1.0	2.0	7.0	5.5	6.0	15.5	13.5	14.5	17.5	16.5	16.5
14	3.0	2.0	2.5	6.0	2.0	4.5	14.5	12.5	13.5	16.5	15.0	15.5
15	3.0	1.5	2.5	6.0	1.5	3.5	13.0	11.0	12.0	15.5	13.5	14.5
16	3.0	1.0	2.0	4.5	2.5	3.0	12.0	10.0	11.0	13.5	13.0	13.0
17	4.5	3.0	3.5	6.0	3.0	4.5	12.0	10.0	11.0	14.5	13.0	13.5
18	4.0	3.5	3.5	6.5	4.0	5.0	13.0	10.0	11.5	15.5	14.0	14.5
19	4.0	3.0	3.5	8.0	4.5	6.0	12.5	11.0	11.5	18.0	14.5	16.0
20	3.0	1.0	2.0	7.5	4.5	6.0	12.0	11.0	11.5	19.5	16.5	18.0
21	3.0	1.0	2.0	9.5	6.5	8.0	11.5	11.0	11.5	21.0	18.5	19.5
22	2.5	1.5	2.0	9.5	8.0	9.0	13.5	10.5	12.0	19.5	17.0	18.0
23	2.5	1.0	1.5	10.5	8.0	9.5	14.0	11.0	13.0	18.5	16.5	17.5
24	3.5	1.0	2.0	11.0	9.5	10.0	15.0	12.5	14.0	17.5	15.5	16.0
25	5.0	3.0	4.0	9.5	6.0	7.5	15.5	12.5	14.0	18.0	15.0	16.5
26	5.5	4.0	5.0	6.0	5.5	6.0	15.0	12.5	13.5	20.5	17.0	18.5
27	4.5	3.0	4.0	8.0	5.5	6.5	12.5	11.0	11.5	20.0	18.5	19.0
28	3.5	2.0	3.0	10.0	7.5	8.5	14.0	10.0	12.0	20.0	17.5	18.5
29	---	---	---	10.5	9.0	10.0	16.0	12.0	14.0	20.0	19.0	19.5
30	---	---	---	10.5	8.0	9.5	17.0	14.5	15.5	22.0	18.5	20.0
31	---	---	---	11.0	8.0	9.5	---	---	---	22.5	20.0	21.5
MONTH	5.5	.5	2.0	11.0	1.0	5.5	17.0	7.0	12.0	22.5	10.0	16.0

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	20.5	22.0	24.5	22.0	23.0	---	---	---	23.5	22.0	23.0
2	24.0	21.0	22.5	23.0	20.0	21.0	22.0	21.5	22.0	23.0	21.5	22.5
3	23.5	20.5	22.0	20.0	17.5	18.5	24.0	21.5	22.5	23.0	21.5	22.0
4	20.5	18.5	19.5	18.0	17.5	17.5	24.0	23.5	23.5	23.0	21.5	22.0
5	20.5	18.5	19.5	20.5	17.0	18.5	23.5	22.5	23.0	22.5	20.5	21.5
6	21.0	18.0	19.5	22.0	19.0	20.5	24.0	22.0	23.0	23.0	21.0	22.0
7	20.5	19.0	19.5	23.0	20.0	21.5	26.0	23.5	24.5	24.0	22.5	23.0
8	21.5	19.5	20.5	23.5	20.5	22.0	26.5	25.0	26.0	23.5	20.5	22.0
9	23.0	20.5	21.5	25.5	22.5	24.0	26.0	24.5	25.5	21.5	19.5	20.5
10	22.5	20.0	21.5	25.0	23.5	24.0	25.5	24.5	24.5	20.5	19.5	20.0
11	23.0	20.0	21.5	24.5	22.5	23.5	25.0	24.0	24.5	21.5	19.5	20.5
12	23.5	20.5	22.0	23.0	21.0	22.0	25.0	23.5	24.5	23.5	21.5	22.5
13	23.0	19.5	21.5	23.0	20.5	22.0	26.0	23.5	24.5	23.0	21.0	22.0
14	20.0	17.5	19.0	22.5	21.5	21.5	26.5	24.5	25.5	21.0	19.5	20.5
15	20.0	17.0	18.5	23.0	21.0	22.0	26.5	24.5	25.5	20.0	19.5	19.5
16	20.0	18.0	19.0	23.0	22.0	22.5	26.5	25.5	26.0	21.5	19.5	20.5
17	20.0	18.5	19.0	22.5	21.0	22.0	27.5	26.0	26.5	22.0	21.0	21.5
18	22.0	18.0	19.5	24.0	21.0	22.5	26.5	25.0	26.0	23.0	21.0	22.0
19	24.5	21.5	23.0	25.0	22.5	23.5	26.5	24.0	25.5	22.5	21.5	22.0
20	25.0	22.5	24.0	26.0	23.5	25.0	26.5	25.0	25.5	22.0	20.5	21.0
21	24.5	21.5	23.0	27.0	25.0	26.0	25.5	23.5	25.0	22.0	20.0	21.0
22	23.0	21.0	22.0	27.5	25.5	26.5	25.0	23.0	24.0	21.5	20.5	21.0
23	23.5	21.0	22.5	28.5	26.5	27.5	25.0	22.5	24.0	20.5	19.5	20.0
24	23.0	21.0	22.0	28.0	26.5	27.5	25.0	23.0	24.0	19.5	17.5	18.5
25	23.0	20.5	22.0	26.5	24.0	25.5	24.5	23.0	24.0	19.5	17.5	18.5
26	22.5	21.0	21.5	24.5	23.0	24.0	24.5	22.5	23.5	18.0	16.5	17.5
27	23.5	20.5	22.0	24.0	23.0	23.5	23.5	20.5	22.5	17.0	15.0	16.0
28	25.5	22.5	24.0	---	---	---	23.0	21.5	22.0	17.0	15.5	16.0
29	25.5	22.5	24.0	---	---	---	24.5	22.5	23.5	16.5	14.0	15.5
30	25.0	23.0	24.0	---	---	---	24.0	23.0	24.0	15.5	13.5	15.0
31	---	---	---	---	---	---	24.0	23.0	23.5	---	---	---
MONTH	25.5	17.0	21.5	28.5	17.0	23.0	27.5	20.5	24.5	24.0	13.5	20.5

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.7	8.2	8.4	11.3	10.4	10.7	12.8	11.2	11.9	11.7	11.3	11.5
2	9.1	8.3	8.6	10.4	9.3	9.9	11.2	11.0	11.1	11.8	11.6	11.7
3	9.8	8.6	9.1	9.3	8.6	9.0	11.5	11.1	11.3	12.6	12.0	12.4
4	10.6	9.5	9.9	8.7	8.2	8.5	12.2	11.8	12.0	13.2	12.9	13.1
5	11.2	10.0	10.4	8.8	8.0	8.3	12.7	12.3	12.5	13.3	12.8	13.1
6	10.8	9.9	10.2	8.7	8.1	8.4	13.0	12.6	12.8	13.1	12.3	12.7
7	11.5	10.0	10.7	9.2	8.4	8.8	14.5	13.5	14.1	12.6	12.3	12.4
8	11.6	10.4	10.8	---	---	---	14.9	14.5	14.7	12.7	12.0	12.5
9	10.5	9.5	10.0	---	---	---	14.8	14.0	14.2	12.4	10.9	11.6
10	10.3	9.5	9.9	10.1	9.9	10.0	15.1	14.1	14.7	13.6	12.5	13.2
11	10.8	10.1	10.4	11.3	10.0	10.7	15.2	15.0	15.1	13.6	13.1	13.5
12	10.8	10.0	10.3	12.1	11.3	11.8	15.2	14.9	15.1	13.1	12.7	13.0
13	10.4	9.6	10.1	12.7	12.0	12.4	14.9	14.0	14.5	12.8	12.5	12.6
14	10.0	9.7	9.8	13.3	12.7	13.0	14.0	12.9	13.6	12.6	12.0	12.2
15	10.2	9.9	10.0	12.9	12.4	12.7	12.9	12.7	12.8	12.5	12.0	12.3
16	10.0	9.7	9.9	12.4	11.9	12.2	13.6	12.9	13.3	12.7	12.4	12.6
17	---	---	---	12.2	10.6	11.1	13.6	13.4	13.5	12.5	12.3	12.4
18	---	---	---	11.6	10.7	11.1	13.4	10.1	12.2	12.3	11.6	11.9
19	10.4	10.0	10.2	12.3	11.5	12.0	12.8	9.4	11.6	12.2	11.7	12.0
20	10.3	9.8	10.0	12.6	12.1	12.4	12.6	11.8	12.3	11.8	11.7	11.8
21	10.4	9.8	10.1	12.2	11.7	12.0	11.8	11.2	11.4	11.8	11.6	11.7
22	10.5	9.8	10.1	---	---	---	12.6	11.5	12.2	11.8	11.6	11.7
23	10.5	9.7	10.1	---	---	---	12.8	12.4	12.6	---	---	---
24	10.8	9.9	10.3	---	---	---	12.5	11.9	12.4	---	---	---
25	11.1	10.1	10.6	---	---	---	11.9	10.8	11.5	---	---	---
26	10.4	9.5	9.9	---	---	---	12.8	11.7	12.4	---	---	---
27	9.4	8.8	9.2	---	---	---	12.8	12.4	12.6	---	---	---
28	9.3	8.4	8.8	13.8	13.5	13.6	12.5	12.3	12.4	---	---	---
29	9.6	8.5	9.0	13.6	13.4	13.5	12.6	12.2	12.4	---	---	---
30	10.4	9.2	9.7	13.4	12.8	13.1	12.3	11.8	12.2	11.8	11.5	11.6
31	10.9	9.9	10.3	---	---	---	11.8	11.3	11.5	12.0	11.6	11.8
MONTH	11.6	8.2	9.9	13.8	8.0	11.2	15.2	9.4	12.8	13.6	10.9	12.3

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.3	11.8	12.1	12.1	10.7	11.4	11.4	10.2	11.0	12.3	8.2	10.2
2	12.0	11.7	11.8	13.7	11.6	12.7	11.6	10.1	10.9	12.6	9.1	10.7
3	12.1	11.7	11.9	13.7	12.9	13.3	12.6	10.9	11.7	12.7	8.6	10.6
4	12.2	11.7	12.0	14.2	13.1	13.6	12.5	11.1	11.9	11.1	8.5	9.9
5	12.3	11.9	12.1	14.3	13.0	13.7	10.8	10.2	10.5	10.4	8.8	9.7
6	12.0	11.7	11.8	14.3	13.2	13.7	11.5	9.9	10.7	11.2	9.4	10.2
7	11.9	11.8	11.8	14.4	13.1	13.8	11.4	9.9	10.6	12.1	9.5	10.6
8	12.1	11.7	12.0	13.9	12.9	13.4	11.3	9.2	10.1	10.8	8.6	9.7
9	12.2	11.7	11.9	14.2	12.8	13.5	11.6	9.1	10.3	10.0	8.4	9.4
10	12.1	11.7	12.0	13.2	12.1	12.7	11.5	9.0	10.1	9.3	8.1	8.9
11	12.1	11.8	12.0	13.7	11.8	12.7	11.3	8.7	9.8	10.7	8.9	9.6
12	12.1	11.6	11.9	12.6	11.1	11.8	11.3	8.5	9.7	10.6	8.4	9.4
13	11.9	11.2	11.6	12.0	11.2	11.7	11.3	8.0	9.5	9.7	8.1	8.9
14	11.4	11.0	11.2	11.8	10.9	11.6	11.8	8.2	10.0	8.8	7.8	8.2
15	11.7	11.1	11.4	11.8	10.2	11.1	12.0	9.0	10.5	9.6	8.1	8.7
16	12.1	11.3	11.7	11.4	10.3	11.0	12.3	9.2	10.7	9.7	8.4	9.3
17	11.5	11.0	11.2	11.6	10.5	11.2	12.3	9.3	10.7	9.2	8.6	9.0
18	11.3	10.8	11.1	11.7	10.9	11.3	12.5	9.2	10.7	9.7	7.8	8.7
19	11.6	10.9	11.2	11.7	10.6	11.3	9.9	8.7	9.3	10.1	9.0	9.7
20	12.2	11.2	11.7	12.6	11.4	12.1	9.3	8.9	9.1	8.9	7.9	8.2
21	12.0	11.5	11.7	11.8	11.0	11.6	10.5	8.9	9.6	8.7	7.6	8.2
22	12.0	11.3	11.6	11.5	10.8	11.2	11.1	9.1	10.0	9.4	8.1	8.7
23	12.1	11.4	11.7	11.6	11.0	11.3	11.4	8.7	10.0	9.6	8.4	8.9
24	12.0	11.3	11.6	11.5	10.8	11.2	11.5	8.4	9.9	8.8	8.0	8.4
25	11.3	10.3	10.7	12.3	11.2	11.9	11.9	8.5	10.0	8.8	7.8	8.5
26	10.9	9.9	10.3	12.3	11.8	12.1	11.6	8.2	9.9	---	---	---
27	11.9	10.0	10.9	11.8	11.2	11.6	12.1	8.9	10.4	---	---	---
28	12.3	11.0	11.6	11.6	10.9	11.3	12.3	9.4	10.7	---	---	---
29	---	---	---	11.4	10.9	11.1	12.2	8.6	10.3	---	---	---
30	---	---	---	11.8	10.9	11.4	11.8	8.0	9.8	9.0	8.0	8.6
31	---	---	---	11.9	11.0	11.5	---	---	---	8.7	7.4	8.0
MONTH	12.3	9.9	11.6	14.4	10.2	12.1	12.6	8.0	10.3	12.7	7.4	9.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	6.9	7.7	8.2	7.2	7.7	---	---	---	---	---	---
2	8.4	6.7	7.5	8.4	7.6	8.0	8.4	8.0	8.3	---	---	---
3	7.4	6.4	6.9	8.5	7.5	8.1	8.6	7.8	8.1	---	---	---
4	7.5	6.4	7.1	8.4	7.1	7.9	8.3	7.4	7.8	---	---	---
5	9.2	8.1	8.8	8.6	8.0	8.4	8.3	7.6	7.9	8.8	8.1	8.5
6	9.2	7.8	8.5	8.2	7.9	8.1	8.2	7.7	7.9	8.9	7.6	8.2
7	8.6	7.8	8.1	8.3	7.8	8.0	8.3	7.4	7.8	9.0	7.3	8.1
8	8.0	7.3	7.6	8.3	7.6	7.9	8.4	7.2	7.8	7.9	7.1	7.6
9	7.6	6.8	7.2	8.2	7.3	7.7	8.9	7.3	8.0	9.3	7.7	8.4
10	7.5	6.4	6.9	8.3	7.1	7.7	8.4	7.4	7.9	9.7	8.0	8.8
11	7.3	6.3	6.8	8.9	7.2	8.0	8.9	7.3	8.1	10.1	8.1	9.0
12	7.1	5.9	6.5	9.7	7.5	8.5	8.3	7.4	7.7	9.9	7.7	8.7
13	8.4	6.8	7.7	10.2	7.7	9.9	8.4	7.2	7.7	9.2	7.2	8.2
14	9.6	7.8	8.6	8.8	7.5	8.2	8.8	7.1	7.8	10.1	8.1	9.0
15	9.8	8.2	9.0	9.8	7.5	8.5	9.2	7.2	8.1	9.7	8.2	8.9
16	9.8	8.0	8.9	8.4	7.2	7.8	9.2	7.2	8.1	9.9	8.1	8.9
17	8.6	7.8	8.2	8.9	7.3	8.0	8.9	7.0	7.9	9.5	7.5	8.6
18	9.2	7.8	8.4	9.4	7.5	8.4	9.2	7.0	8.0	9.8	7.5	8.5
19	9.9	6.8	8.3	9.6	7.3	8.3	9.3	7.2	8.2	---	---	---
20	9.6	7.6	8.5	9.7	7.1	8.3	9.2	7.1	8.1	---	---	---
21	9.3	7.1	8.1	9.6	6.6	8.0	10.0	7.2	8.4	---	---	---
22	8.0	6.6	7.5	9.4	6.5	7.8	10.2	7.9	8.9	---	---	---
23	9.0	7.7	8.3	9.1	6.2	7.6	10.4	7.9	9.0	---	---	---
24	9.4	8.0	8.6	8.9	6.0	7.3	10.6	7.8	9.0	---	---	---
25	9.4	8.2	8.8	8.1	6.2	7.1	9.3	7.6	8.3	10.1	7.8	8.5
26	8.6	7.9	8.2	8.7	6.8	7.6	10.2	7.6	8.7	10.3	8.4	9.3
27	7.8	6.2	7.1	7.5	6.8	7.1	9.3	7.3	8.1	10.9	9.4	10.1
28	7.2	7.0	7.1	---	---	---	7.8	6.5	7.1	10.9	9.4	10.1
29	7.6	7.0	7.3	---	---	---	7.0	5.8	6.4	11.2	9.5	10.3
30	7.8	7.1	7.4	---	---	---	6.6	5.6	6.1	11.4	9.7	10.5
31	---	---	---	---	---	---	6.0	5.3	5.7	---	---	---
MONTH	9.9	5.9	7.9	10.2	6.0	8.0	10.6	5.3	7.9	11.4	7.1	8.9

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	164	11	4.9	168	10	4.5	1250	120	535
2	181	12	5.9	172	11	5.1	660	49	87
3	160	10	4.3	202	14	7.6	505	20	27
4	141	9	3.4	323	23	20	460	11	14
5	137	8	3.0	241	15	9.8	460	9	11
6	137	8	3.0	219	13	7.7	615	25	42
7	141	7	2.7	1180	252	1060	470	12	15
8	137	6	2.2	2300	416	3460	385	9	9.4
9	362	38	46	700	46	87	400	7	7.6
10	371	33	41	519	24	33	352	7	6.7
11	215	11	6.4	705	54	107	333	8	7.2
12	177	8	3.8	465	22	28	328	8	7.1
13	172	8	3.7	395	11	12	347	7	6.6
14	177	10	4.8	352	6	5.7	520	24	54
15	500	39	54	333	5	4.5	875	82	222
16	337	32	34	318	8	6.9	585	10	14
17	535	101	158	342	11	10	430	8	9.3
18	352	25	24	455	23	29	2680	387	4770
19	263	12	8.5	347	9	8.4	3840	244	3430
20	246	10	6.6	314	9	7.6	1230	43	143
21	219	8	4.7	304	8	6.6	2200	125	916
22	202	8	4.4	318	10	8.6	1360	43	158
23	193	8	4.2	755	61	141	960	13	34
24	181	6	2.9	570	47	66	865	9	21
25	177	6	2.9	410	19	21	1040	28	79
26	193	8	4.2	1260	210	836	860	17	39
27	241	16	10	560	30	45	660	7	12
28	224	15	9.1	440	15	18	630	5	8.5
29	193	13	6.8	470	7	7.9	575	5	7.8
30	181	12	5.9	465	9	11	570	5	7.7
31	172	9	4.2	---	---	---	585	6	9.5
TOTAL	7061	---	479.5	15493	---	6054.9	26950	---	10710.4

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	570	5	7.7	865	13	30	425	4	4.6
2	555	5	7.5	810	9	20	400	3	3.2
3	510	5	6.9	755	8	16	420	3	3.4
4	470	3	3.8	705	7	13	420	3	3.4
5	475	5	6.4	660	6	11	380	3	3.1
6	485	4	5.2	650	9	16	380	5	5.1
7	500	4	5.4	600	10	16	380	4	4.1
8	630	21	36	680	13	24	385	3	3.1
9	3470	567	5960	625	11	19	380	2	2.1
10	975	92	242	575	8	12	390	2	2.1
11	765	20	41	570	8	12	435	9	11
12	665	15	27	565	7	11	680	67	144
13	705	15	29	595	5	8.0	1160	201	786
14	1550	162	755	590	6	9.6	2820	765	8850
15	775	25	52	505	6	8.2	4620	427	5660
16	600	9	15	495	5	6.7	1990	185	994
17	635	6	10	500	4	5.4	1100	42	127
18	2030	228	1380	480	4	5.2	970	21	55
19	1020	38	105	470	3	3.8	1240	114	659
20	855	18	42	450	6	7.3	1600	201	1060
21	810	15	33	440	5	5.9	1310	74	262
22	725	12	23	435	5	5.9	1440	68	264
23	665	7	13	430	4	4.6	1030	26	72
24	630	6	10	435	3	3.5	910	16	39
25	2050	275	3040	435	2	2.3	790	13	28
26	10600	652	20100	455	2	2.5	1960	284	3180
27	4190	165	1870	440	3	3.6	6880	386	5410
28	1620	45	197	425	2	2.3	1750	86	406
29	1290	26	91	---	---	---	1290	33	115
30	1090	18	53	---	---	---	1090	18	53
31	970	14	37	---	---	---	1000	12	32
TOTAL	42880	---	34203.9	15640	---	284.8	38825	---	28241.2

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	925	10	25	390	3	3.2	455	13	16
2	845	9	21	380	2	2.1	430	11	13
3	780	6	13	380	2	2.1	440	13	15
4	810	6	13	385	3	3.1	590	28	45
5	925	20	50	505	6	8.2	470	23	29
6	750	10	20	450	3	3.6	440	22	26
7	805	8	17	430	3	3.5	425	20	23
8	715	7	14	410	3	3.3	475	23	29
9	645	6	10	815	32	84	455	18	22
10	625	5	8.4	930	123	354	405	13	14
11	605	4	6.5	615	17	28	385	12	12
12	585	4	6.3	550	15	22	366	10	9.9
13	540	5	7.3	540	15	22	435	15	18
14	505	4	5.5	2710	308	3680	390	14	15
15	490	4	5.3	1720	145	673	347	11	10
16	485	4	5.2	1270	66	226	333	12	11
17	475	4	5.1	1250	64	216	342	10	9.2
18	470	4	5.1	1370	86	318	352	9	8.6
19	660	8	14	1060	34	97	337	8	7.3
20	990	41	110	875	26	61	323	9	7.8
21	695	6	11	775	23	48	650	68	58
22	595	5	8.0	695	24	45	780	230	484
23	550	4	5.9	660	20	36	385	45	47
24	525	4	5.7	850	53	122	347	26	24
25	455	4	4.9	790	28	60	328	19	17
26	440	4	4.8	645	23	40	318	17	15
27	435	3	3.5	600	24	39	1490	553	3680
28	435	3	3.5	590	19	30	525	140	198
29	410	3	3.3	570	16	25	366	46	45
30	405	3	3.3	540	14	20	337	30	27
31	---	---	---	475	11	14	---	---	---
TOTAL	18575	---	423.6	24225	---	6289.1	13521	---	4935.8

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	314	23	19	366	30	30	688	42	77
2	304	20	16	378	26	23	440	13	15
3	1700	339	3690	300	18	15	366	10	9.9
4	2640	175	1250	290	16	13	342	7	6.5
5	735	40	79	356	24	23	300	6	4.9
6	590	26	41	405	33	36	268	6	4.3
7	510	14	19	318	22	19	259	6	4.2
8	455	12	15	295	15	12	268	6	4.3
9	390	9	9.5	263	15	11	272	6	4.4
10	371	5	5.0	304	28	23	246	6	4.0
11	361	7	6.8	281	17	13	232	4	2.5
12	337	5	4.5	371	56	56	246	3	2.0
13	323	3	2.6	333	26	23	272	12	8.8
14	328	3	2.7	318	18	15	224	4	2.4
15	356	4	3.8	263	17	12	228	5	3.1
16	347	5	4.7	254	16	11	241	6	3.9
17	347	5	4.7	261	18	12	241	7	4.6
18	323	6	5.2	232	13	8.1	224	7	4.2
19	300	7	5.7	228	10	6.2	500	40	63
20	290	8	6.3	228	10	6.2	323	18	16
21	286	8	6.2	224	9	5.4	237	9	5.8
22	281	7	5.3	219	8	4.7	237	8	5.1
23	277	7	5.2	215	10	5.8	237	8	5.1
24	246	4	2.7	202	9	4.9	228	7	4.3
25	272	4	2.9	193	8	4.2	215	7	4.1
26	300	7	5.7	206	10	5.6	206	8	4.4
27	342	13	12	500	215	1080	202	9	4.9
28	1150	316	1490	4690	540	6550	202	10	5.5
29	337	34	31	1010	42	115	193	9	4.7
30	290	14	11	440	16	19	193	8	4.2
31	337	31	28	450	17	21	---	---	---
TOTAL	15519	---	6790.5	14123	---	8103.1	8322	---	293.1
YEAR	240334		106809.9						

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

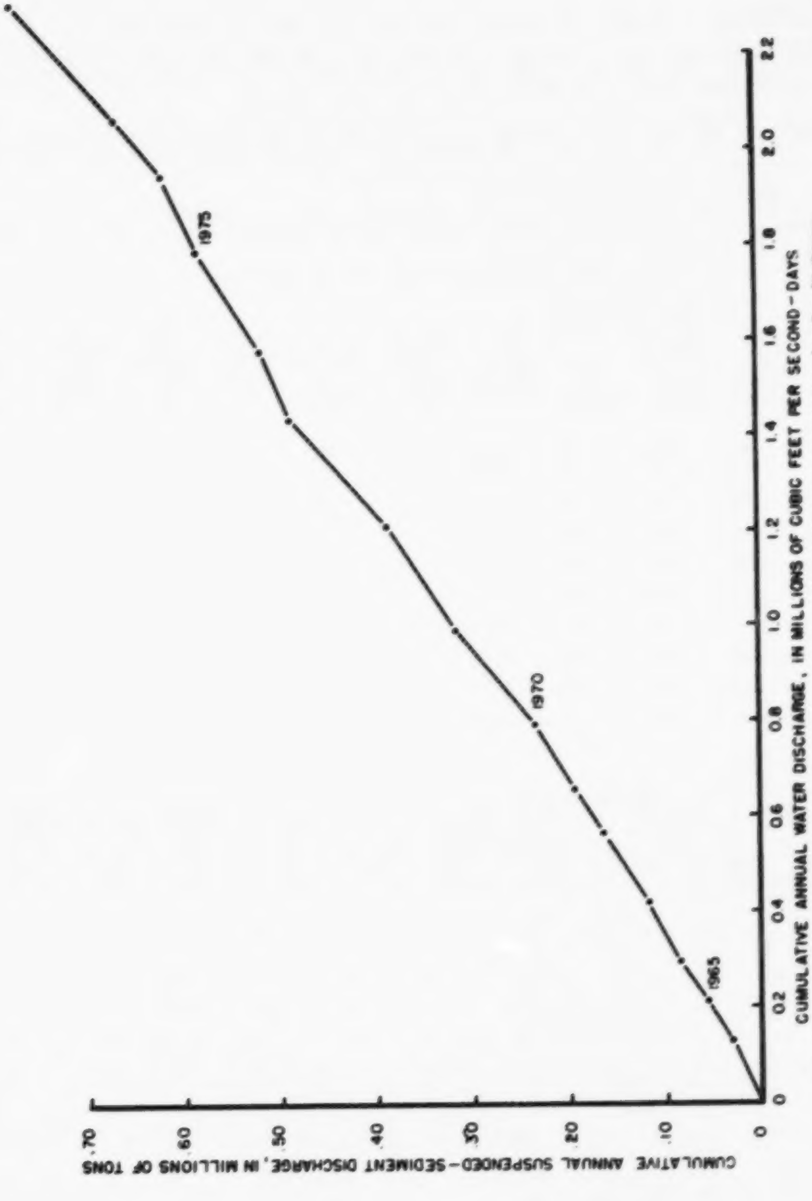

FIGURE 11.-Double mass accumulation of annual suspended-sediment discharge versus annual water discharge, Brandywine at Chadds Ford, Pa.

TABLE 3.--Suspended sediment concentration-duration table, Brandywine Creek at Chadds Ford

Period	Mean daily concentration, in milligrams per liter that was equaled or exceeded for indicated percentage of time													
	1	2	5	10	20	30	40	50	60	70	80	90	95	99
1978	565	380	218	80	30	21	15	11	8	7	6	4	3	2
1964-78	490	315	130	52	27	19	15	12	10	8	6	4	3	1

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1946 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED SEDIMENT DISCHARGE: December 1946 to September 1961, July 1962 to current year.

REMARKS.--Unpublished chemical-quality data and specific conductance, pH, and temperature of sediment samples available in the district office at Towson, Md. Sediment data from 01481000 Brandywine Creek at Chadds Ford, Pa., are used in computation of sediment records.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily, 1,700 mg/L Feb. 14, 1966; minimum daily, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 35,700 tons (32,400 tonnes) Feb. 14, 1971; minimum daily, less than 0.50 ton (0.45 tonne) on many days.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily, 778 mg/L Jan. 26; minimum daily, 1 mg/L Apr. 17, 18.
SEDIMENT LOADS: Maximum daily, 24,000 tons (21,800 tonnes) Jan. 26; minimum daily, 1.4 tons (1.3 tonnes) Apr. 17, 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT											
03...	1215	189	236	7.5	15.5	--	10.4	--	--	--	--
31...	1415	185	220	7.9	13.0	--	8.2	--	--	--	--
DEC											
01...	1225	1740	--	7.7	7.5	--	--	--	--	--	--
JAN											
03...	1320	620	221	7.6	.0	4	14.8	73	39	18	6.8
FEB											
01...	1230	1050	174	7.9	.0	--	15.0	--	--	--	--
MAR											
01...	1105	473	210	7.2	1.0	15	14.6	70	32	17	6.6
APR											
03...	1235	920	172	7.3	5.5	--	12.2	--	--	--	--
MAY											
01...	1245	460	194	7.6	13.5	--	11.6	--	--	--	--
JUN											
01...	1500	511	184	7.7	24.0	10	8.4	74	37	18	7.0
JUL											
04...	1150	3900	100	7.0	16.0	--	8.0	--	--	--	--

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT										
03...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	11	24	.6	2.4	41	0	34	1.6	23	.1
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	11	25	.6	2.4	46	0	38	4.6	23	.1
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	--	--	--	--	--	--	--	--	--
JUN										
01...	8.4	19	.4	2.2	45	0	37	1.4	24	.1
JUL										
04...	--	--	--	--	--	--	--	--	--	--

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)
OCT										
03...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
DEC										
01...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	13	130	113	2.7	.08	290	50	30	0	30
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	12	127	113	2.8	.10	--	40	--	--	40
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
01...	--	--	--	--	--	--	--	--	--	--
JUN										
01...	9.4	117	107	2.2	.12	480	80	60	20	40
JUL										
04...	--	--	--	--	--	--	--	--	--	--

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	196	12	6.4	192	7	3.6	1680	149	735
2	208	14	7.9	198	9	4.8	906	62	152
3	195	17	9.0	244	15	9.9	646	21	37
4	180	12	5.8	390	24	25	552	11	16
5	170	11	5.0	303	10	8.2	542	9	13
6	168	13	5.9	264	8	5.7	796	24	52
7	173	14	6.5	1570	356	1770	576	17	26
8	170	13	6.0	2690	682	5800	430	8	9.3
9	430	40	46	898	55	133	438	6	7.1
10	563	34	52	623	17	29	376	5	5.1
11	262	20	14	825	39	87	338	5	4.6
12	214	14	8.1	568	20	31	322	5	4.3
13	197	12	6.4	428	12	14	381	5	5.1
14	210	17	9.6	366	7	6.9	556	14	33
15	579	27	42	340	4	3.7	1140	94	298
16	444	21	25	320	5	4.3	648	18	31
17	692	110	206	347	10	9.4	500	9	12
18	460	46	57	504	23	31	2440	227	2520
19	309	18	15	361	12	12	4460	315	4460
20	287	15	12	315	9	7.7	1570	47	199
21	256	12	8.3	300	6	4.9	2520	144	1150
22	234	10	6.3	309	7	5.8	1800	55	267
23	218	10	5.9	795	44	112	1190	17	55
24	210	8	4.5	670	31	56	1070	10	29
25	202	8	4.4	474	14	18	1250	32	108
26	209	11	6.2	1540	210	996	1110	18	54
27	236	13	8.3	750	61	124	804	8	17
28	241	11	7.2	511	20	28	768	5	10
29	205	9	5.0	464	9	11	697	6	11
30	189	8	4.1	551	9	13	687	6	11
31	193	7	3.6	---	---	---	701	6	11
TOTAL	8500	---	609.4	18110	---	9364.9	31894	---	10342.5

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JANUARY			FEBRUARY			MARCH	
1	691	5	9.3	1010	11	30	461	11	14
2	670	4	7.2	960	11	29	418	10	11
3	598	5	8.1	886	9	22	441	10	12
4	513	4	5.5	826	10	22	440	9	11
5	551	5	7.4	765	11	23	391	6	6.3
6	553	5	7.5	788	10	21	393	6	6.4
7	580	6	9.4	603	9	15	395	7	7.5
8	700	18	34	810	7	15	408	7	7.7
9	3550	590	6350	690	6	11	389	6	6.3
10	1330	95	341	600	5	8.1	404	5	5.5
11	895	18	43	600	7	11	446	7	8.4
12	795	14	30	620	9	15	788	50	106
13	802	17	37	630	12	20	1330	165	745
14	1978	170	1030	700	13	25	2630	452	4210
15	1010	27	74	572	9	14	4210	525	6350
16	737	9	18	547	8	12	2340	245	1550
17	813	14	31	563	6	9.1	1300	44	154
18	2670	240	1930	552	7	10	1140	21	65
19	1390	44	165	543	6	8.8	1250	103	513
20	1090	18	53	534	6	8.7	1880	254	1460
21	1020	14	39	553	5	7.5	1510	81	330
22	915	10	25	478	6	7.7	1690	71	324
23	804	8	17	457	9	11	1210	24	78
24	753	7	14	471	9	11	1050	15	43
25	2210	323	3830	477	8	10	932	13	33
26	11200	778	24000	491	8	11	2010	336	3150
27	5110	195	2690	482	8	10	4650	466	6110
28	1920	60	311	444	10	12	2090	81	457
29	1560	32	135	---	---	---	1550	31	130
30	1270	22	75	---	---	---	1270	17	58
31	1120	13	39	---	---	---	1160	10	31
TOTAL	49790	---	41365.4	17652	---	409.9	40576	---	25993.1

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	1070	8	23	420	4	4.5	509	14	19
2	1010	6	16	411	5	5.5	485	14	18
3	930	4	10	406	6	6.6	463	14	18
4	980	3	7.9	426	7	8.1	707	20	38
5	1060	18	52	607	9	15	522	14	20
6	895	8	19	529	4	5.7	496	15	20
7	955	7	18	494	3	4.0	527	19	27
8	846	5	11	474	4	5.1	639	27	47
9	755	3	6.1	1070	30	102	524	19	27
10	722	2	3.9	1180	118	425	444	14	17
11	706	5	9.5	689	17	32	417	13	15
12	676	8	15	580	11	17	389	15	16
13	599	4	6.5	542	10	15	463	17	21
14	559	4	6.0	2690	339	3030	427	14	16
15	535	3	4.3	2190	153	905	370	10	10
16	532	2	2.9	1560	63	265	354	13	12
17	517	1	1.4	1540	70	291	355	10	9.6
18	513	1	1.4	1680	92	417	371	7	7.0
19	747	10	20	1270	31	106	354	6	5.7
20	1208	40	135	1060	18	52	337	5	4.5
21	849	6	14	959	18	47	642	60	104
22	698	4	7.5	850	17	39	1050	210	595
23	623	2	3.4	797	15	32	426	41	47
24	581	2	3.1	1160	57	179	359	19	18
25	508	3	4.1	1010	21	57	339	16	15
26	488	4	5.2	819	14	31	325	14	12
27	467	4	5.0	740	13	26	1440	278	1960
28	468	3	3.8	732	14	28	660	121	216
29	440	5	5.9	701	13	25	383	46	48
30	443	5	6.0	668	13	23	349	24	23
31	---	---	---	539	13	19	---	---	---
TOTAL	21364	---	426.9	28793	---	6217.5	15126	---	3405.8

01481500 BRANDYWINE CREEK AT WILMINGTON, DE--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		JULY			AUGUST			SEPTEMBER	
1	318	19	16	399	37	40	792	40	86
2	306	17	14	336	25	23	535	18	26
3	2020	300	3760	304	23	19	396	14	15
4	3470	205	1920	300	18	15	357	12	12
5	890	29	70	367	26	26	324	9	7.9
6	693	19	36	464	34	43	289	6	4.7
7	566	15	23	349	18	17	280	5	3.8
8	489	14	18	301	17	14	289	8	6.2
9	408	12	13	267	17	12	294	7	5.6
10	383	10	10	335	34	31	271	6	4.4
11	379	8	8.2	295	19	15	256	5	3.5
12	342	7	6.5	363	49	48	268	8	5.8
13	326	9	7.9	331	25	22	317	13	11
14	311	7	5.9	320	19	16	244	6	4.0
15	343	7	6.5	259	19	13	246	5	3.3
16	344	7	6.5	246	14	9.3	258	6	4.2
17	351	7	6.6	240	10	6.5	272	6	4.4
18	328	6	5.3	228	9	5.5	243	7	4.5
19	297	6	4.8	218	9	5.3	558	42	70
20	285	5	3.8	215	8	4.6	406	24	26
21	280	5	3.8	207	9	5.0	269	17	12
22	272	4	2.9	205	8	4.4	256	10	6.9
23	266	6	4.3	197	6	3.2	266	9	6.5
24	247	4	2.7	193	6	3.1	248	9	6.0
25	253	6	4.1	193	7	3.6	245	9	6.0
26	306	9	7.4	195	8	4.2	229	9	5.6
27	259	10	7.0	614	108	631	225	11	6.7
28	1470	340	1870	4230	586	7610	229	9	5.6
29	363	57	56	969	38	99	218	8	4.7
30	297	21	17	478	14	18	220	7	4.2
31	342	26	24	508	13	18	---	---	---
TOTAL	17204	---	7941.2	14126	---	8784.7	9300	---	372.5
YEAR	272435		115233.9						

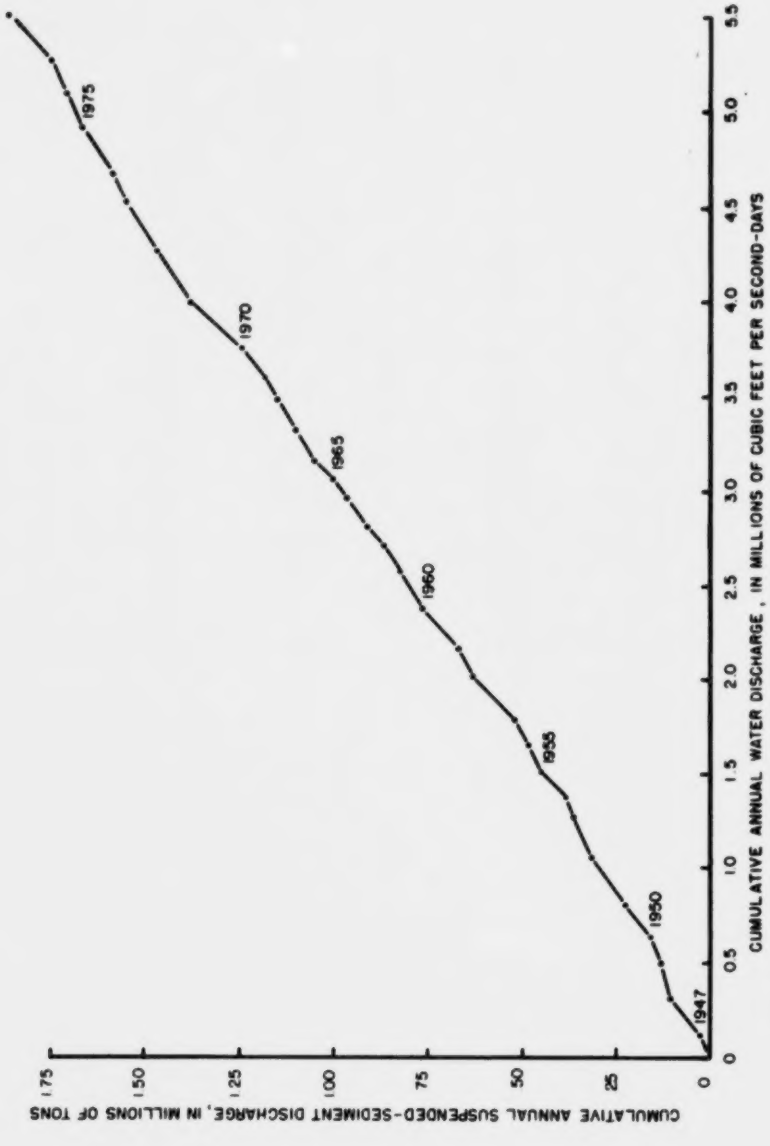

FIGURE 12.--Double mass accumulation of annual suspended-sediment discharge versus annual water discharge, Brandywine Creek at Wilmington, Delaware

TABLE 4.--Suspended sediment concentration-duration table, Brandywine Creek at Wilmington, DE

Period	Mean daily concentration, in milligrams per liter, that was equaled or exceeded for indicated percentage of time													
	1	2	5	10	20	30	40	50	60	70	80	90	95	99
1978	560	370	225	85	30	18	15	12	10	8	7	5	4	2
1948-78*	483	304	132	60	28	19	15	12	10	8	6	5	4	3

* Excludes 1962, 63, 65

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE

LOCATION.--Lat 39°41'21", long 75°31'19", New Castle County, Hydrologic Unit 02040205, at tidal gaging station located on channel side of west tower of south bridge between Pigeon Point, DE, and Deepwater Point, NJ.

DRAINAGE AREA.--11,030 mi^2 (28,600 km^2).

PERIOD OF RECORD.--July 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: January 1968 to current year.
WATER TEMPERATURES: October 1956 to current year.
DISSOLVED OXYGEN: November 1962 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 12,700 micromhos Nov. 13, 1966; minimum, 100 micromhos on many days.
pH: Maximum, 9.3 Nov. 10-11, 13, 1970; minimum, 4.2 Nov. 6, 1969.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 9, 1968; minimum, freezing point on many days during winter periods.
DISSOLVED OXYGEN: Maximum, 13.5 mg/L Dec. 29, 1969; minimum, 0.0 mg/L on many days during summer periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 6,330 micromhos Sept. 30; minimum, 110 micromhos Oct. 21, Mar. 30.
pH: Maximum, 7.2 Aug. 25, 27, Sept. 13; minimum, 6.1 June 8.
WATER TEMPERATURES: Maximum, 29.5°C Aug. 16-20; minimum, 1.0°C on many days during January and February.
DISSOLVED OXYGEN: Maximum, 13.3 mg/L Jan. 20; minimum, 0.6 mg/L Aug. 15.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
APR 25...	1025	202	6.6	13.0	6.7	20	58	33	15	5.0
JUN 05...	1030	265	6.3	22.5	4.2	25	53	25	14	4.3
JUL 12...	1030	768	6.6	25.5	3.8	36	130	100	25	16
AUG 16...	1046	1380	6.8	29.0	3.1	35	210	170	33	31
SEP 26...	1115	3065	6.9	22.5	5.3	41	280	250	15	60

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
APR 25...	12	30	.7	2.0	30	0	25	12	33	16
JUN 05...	11	11	.7	2.2	34	0	28	27	29	15
JUL 12...	85	58	3.3	5.1	30	0	25	12	64	150
AUG 16...	200	66	6.0	11	47	0	39	12	94	330
SEP 26...	480	77	12	19	46	0	39	9.3	160	830

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
APR 25...	120	.98	.02	1.0	.82	.58	1.4	2.4	.18	.03
JUN 05...	116	1.5	.01	1.5	.29	.81	1.1	2.6	.15	.03
JUL 12...	463	2.6	.01	2.6	.04	1.8	1.8	4.4	.20	.03
AUG 16...	805	2.6	.01	2.6	.08	1.2	1.3	3.9	.22	.07
SEP 26...	1730	2.6	.09	2.7	.18	.92	1.1	3.8	.13	.05

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 25...	--	--	--	--	--	--	--	--	8.1
JUN 05...	--	--	--	--	--	--	--	--	4.5
JUL 12...	1	0	10	100	29	.5	56	120	11
AUG 16...	3	4	10	200	58	.8	180	130	6.3
SEP 26...	--	--	--	--	--	--	--	--	8.0

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	3350	410	1380	570	160	282	250	200	215	---	---	---
2	2160	330	1100	610	160	284	220	200	209	---	---	---
3	1330	320	787	640	160	311	210	200	207	---	---	---
4	1140	280	656	580	160	293	220	210	211	---	---	---
5	1500	260	633	680	130	293	250	210	217	---	---	---
6	1470	260	693	990	170	417	230	200	215	260	210	221
7	1930	260	808	1350	180	423	210	190	203	380	210	253
8	3340	300	1220	400	170	232	230	190	204	700	210	300
9	3130	260	1410	230	190	198	330	190	216	450	220	262
10	2000	210	940	390	190	228	210	180	196	250	210	232
11	1940	230	950	390	210	230	260	190	206	240	210	221
12	1740	200	777	670	210	252	340	190	226	220	190	210
13	2100	190	829	370	200	232	410	190	246	230	180	206
14	3750	250	1290	390	200	230	450	190	273	220	160	197
15	2290	200	955	450	200	253	340	190	236	200	150	173
16	2710	220	1010	480	190	242	260	190	211	170	150	162
17	1460	180	497	340	190	241	250	200	209	180	160	165
18	880	180	379	250	190	210	210	200	206	190	160	172
19	670	180	333	390	180	209	---	---	---	200	170	182
20	350	190	219	330	180	236	210	200	203	220	180	187
21	310	110	215	350	190	249	210	200	204	210	180	193
22	270	180	214	290	180	225	---	---	---	220	190	203
23	310	180	208	330	190	236	---	---	---	340	200	224
24	260	170	208	310	190	233	---	---	---	390	210	239
25	270	160	205	460	190	236	---	---	---	500	220	268
26	410	160	218	400	190	232	---	---	---	300	200	241
27	410	150	240	390	190	200	---	---	---	250	170	215
28	450	150	233	210	200	203	---	---	---	390	190	201
29	510	160	262	230	200	208	---	---	---	190	170	186
30	540	160	309	250	200	216	---	---	---	190	170	179
31	520	160	289	---	---	---	---	---	---	180	170	176
MONTH	3750	110	628	1350	130	251	450	180	216	700	150	210

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	190	170	175	2630	390	1360	150	140	149	1580	230	693
2	200	160	175	2290	350	1200	150	140	146	1590	220	685
3	230	160	177	2270	340	1250	160	140	148	1650	260	783
4	320	160	191	2460	370	1170	150	140	147	1840	270	859
5	460	170	224	1990	320	1010	150	140	147	1980	330	1160
6	700	170	242	2140	330	1020	150	140	148	2210	270	1110
7	720	170	275	1720	330	891	160	140	149	2180	260	952
8	1800	180	560	2390	390	1230	170	140	150	2390	300	1080
9	1520	180	633	2670	500	1440	160	150	151	2530	250	1090
10	1750	190	616	2940	480	1560	170	150	152	1630	250	775
11	1610	190	696	3460	480	1740	160	150	153	1590	250	665
12	1470	200	584	---	---	---	170	150	156	1320	260	691
13	1510	200	655	---	---	---	170	150	157	1260	270	700
14	2030	210	755	---	---	---	170	150	160	1850	270	700
15	1360	210	626	---	---	---	170	160	161	790	250	416
16	1350	220	603	---	---	---	170	160	167	350	250	273
17	1320	220	594	330	300	317	530	160	218	280	250	262
18	1240	230	560	330	270	303	580	170	239	260	230	255
19	1250	230	562	390	250	293	2060	170	414	260	200	233
20	1530	240	646	---	---	---	1010	170	347	250	180	212
21	2320	240	758	---	---	---	600	170	264	330	170	201
22	1440	250	592	270	230	247	730	180	276	340	160	193
23	1400	250	579	280	230	243	960	180	357	260	160	195
24	2440	270	909	260	220	233	1310	180	410	---	---	---
25	2370	290	1140	250	210	228	1270	190	479	---	---	---
26	2550	300	1170	250	210	225	1370	200	556	---	---	---
27	2250	300	1010	---	---	---	1350	220	651	---	---	---
28	2590	350	1200	---	---	---	1590	220	737	---	---	---
29	---	---	---	150	140	146	1540	210	719	---	---	---
30	---	---	---	160	110	145	1640	210	674	---	---	---
31	---	---	---	150	140	149	---	---	---	260	230	248
MONTH	2590	160	607	3460	110	745	2060	140	293	2530	160	601

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	270	230	248	2660	590	1470	4320	1480	2790	---	---	---
2	290	240	251	3040	640	1550	3990	1390	2640	---	---	---
3	310	240	260	2880	750	1760	4440	1410	2700	---	---	---
4	350	250	265	2630	390	1170	4570	1200	2680	---	---	---
5	340	250	278	2990	390	1160	4250	1210	2540	2920	750	1800
6	430	260	292	1960	400	1020	4060	1130	2450	3170	770	1930
7	540	260	319	1960	380	989	3890	750	2180	3740	760	2060
8	480	270	316	2090	390	1060	3700	610	1840	4370	820	2340
9	360	270	299	2210	410	1140	2300	520	1510	3720	830	2390
10	360	270	301	2500	440	1240	2140	540	1360	4790	1120	2660
11	450	280	324	2110	440	1260	2280	550	1320	4630	1220	2700
12	440	280	335	2540	490	1370	2030	480	1270	3970	1010	2470
13	450	290	335	2780	510	1490	1700	430	1060	4330	1090	2560
14	340	300	313	2880	570	1580	1990	430	985	4450	1460	2810
15	500	300	335	3110	580	1640	2170	430	1030	4720	1270	2800
16	670	300	374	3350	660	1730	2560	480	1160	4930	1340	2890
17	800	310	435	4240	700	1850	3000	450	1250	5170	1330	3020
18	1090	310	481	3620	610	1840	3270	490	1380	4930	1490	3180
19	1350	310	561	4230	710	1920	3470	570	1600	5330	1550	3270
20	1440	320	698	4780	750	2160	3630	550	1670	5520	1660	3450
21	1820	350	843	4330	820	2260	3350	720	1910	4920	1530	3140
22	2350	330	909	4450	930	2470	3360	880	2090	4230	1390	2790
23	2710	340	1010	4250	970	2610	3330	900	2210	4680	1440	3120
24	2430	360	1130	4450	1040	2680	3650	950	2240	4330	1620	3000
25	2340	380	1200	4440	1330	3030	4350	1100	2550	4310	1440	2840
26	2290	440	1350	4550	1410	3000	4220	1350	2680	4910	1570	3000
27	2910	410	1380	4640	1670	3130	4480	1450	2680	5170	1870	3200
28	2070	440	1240	4230	1370	2840	3460	950	2250	4930	1540	3250
29	2330	470	1240	4370	1480	2800	4050	680	1820	5770	1670	3440
30	2900	500	1380	4420	1350	2750	2790	670	1610	6330	1990	3770
31	---	---	---	4350	1610	2910	2610	670	1580	---	---	---
MONTH	2910	230	625	4780	380	1930	4570	430	1900	6330	750	2840

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.8	6.4	6.6	6.6	6.3	6.5	6.6	6.5	6.5	---	---	---
2	6.7	6.4	6.6	6.6	6.3	6.5	6.5	6.4	6.5	---	---	---
3	6.6	6.5	6.5	6.6	6.3	6.4	6.5	6.4	6.5	---	---	---
4	6.7	6.5	6.6	6.5	6.3	6.4	6.5	6.4	6.5	---	---	---
5	6.7	6.5	6.6	6.5	6.2	6.4	6.5	6.5	6.5	---	---	---
6	6.7	6.5	6.6	6.6	6.3	6.4	6.6	6.5	6.5	6.8	6.7	6.8
7	6.8	6.5	6.6	6.7	6.4	6.5	6.7	6.6	6.6	6.9	6.7	6.8
8	6.9	6.5	6.7	6.6	6.4	6.5	6.8	6.6	6.7	7.0	6.7	6.8
9	6.9	6.5	6.7	6.5	6.3	6.4	6.8	6.7	6.7	6.9	6.8	6.8
10	6.8	6.4	6.6	6.4	6.3	6.4	6.8	6.7	6.7	6.9	6.7	6.8
11	6.8	6.3	6.6	6.4	6.4	6.4	6.9	6.7	6.8	7.0	6.8	6.9
12	6.7	6.3	6.5	6.5	6.4	6.4	6.9	6.7	6.8	7.0	6.9	7.0
13	6.8	6.2	6.5	6.5	6.4	6.5	6.9	6.6	6.8	7.0	6.9	6.9
14	7.0	6.3	6.7	6.6	6.5	6.5	6.9	6.6	6.7	7.0	6.7	7.0
15	6.9	6.3	6.6	6.6	6.5	6.5	6.8	6.5	6.7	6.9	6.6	6.8
16	6.9	6.3	6.6	6.6	6.5	6.5	6.7	6.5	6.6	6.8	6.6	6.7
17	6.7	6.4	6.5	6.6	6.4	6.5	6.7	6.4	6.5	6.8	6.6	6.7
18	6.7	6.4	6.5	6.6	6.4	6.5	6.5	6.4	6.4	6.7	6.6	6.6
19	6.5	6.4	6.4	6.6	6.4	6.5	---	---	---	6.7	6.6	6.6
20	6.5	6.4	6.4	6.6	6.4	6.5	6.6	6.6	6.6	6.8	6.6	6.7
21	6.5	6.3	6.4	6.6	6.4	6.5	6.7	6.5	6.6	6.7	6.7	6.7
22	6.5	6.4	6.4	6.6	6.4	6.5	---	---	---	6.7	6.7	6.7
23	6.5	6.4	6.4	6.6	6.4	6.5	---	---	---	6.7	6.7	6.7
24	6.5	6.4	6.5	6.6	6.3	6.5	---	---	---	6.8	6.7	6.7
25	6.5	6.4	6.4	6.6	6.3	6.4	---	---	---	6.8	6.7	6.7
26	6.5	6.3	6.4	6.6	6.4	6.5	---	---	---	6.8	6.6	6.7
27	6.5	6.3	6.4	6.5	6.4	6.5	---	---	---	6.9	6.7	6.7
28	6.4	6.3	6.4	6.6	6.4	6.5	---	---	---	6.9	6.8	6.9
29	6.5	6.3	6.4	6.5	6.4	6.5	---	---	---	6.9	6.8	6.9
30	6.6	6.3	6.4	6.6	6.5	6.5	---	---	---	6.9	6.8	6.8
31	6.5	6.3	6.4	---	---	---	---	---	---	6.8	6.8	6.8
MONTH	7.0	6.2	6.5	6.7	6.2	6.5	6.9	6.4	6.6	7.0	6.6	6.8

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.8	6.8	6.8	7.0	6.6	6.8	6.7	6.7	6.7	7.0	6.7	6.8
2	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7	7.0	6.6	6.8
3	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7	7.0	6.6	6.8
4	6.8	6.7	6.7	7.0	6.6	6.8	6.7	6.6	6.6	7.1	6.6	6.8
5	6.9	6.7	6.7	7.0	6.6	6.8	6.6	6.6	6.6	7.1	6.7	6.9
6	6.9	6.6	6.7	7.0	6.6	6.8	6.6	6.5	6.6	7.1	6.7	6.9
7	7.0	6.6	6.8	7.0	6.6	6.8	6.6	6.5	6.6	7.0	6.6	6.8
8	7.1	6.7	6.9	7.1	6.6	6.9	6.6	6.5	6.6	7.0	6.6	6.8
9	7.0	6.7	6.9	7.1	6.7	6.9	6.6	6.6	6.6	7.0	6.6	6.8
10	7.0	6.7	6.8	7.1	6.7	6.9	6.6	6.5	6.6	6.9	6.6	6.7
11	7.0	6.6	6.8	7.1	6.7	6.9	6.6	6.5	6.6	6.9	6.5	6.7
12	7.0	6.4	6.7	---	---	---	6.7	6.6	6.6	6.8	6.6	6.7
13	7.0	6.5	6.7	---	---	---	6.7	6.5	6.6	6.9	6.6	6.7
14	7.0	6.6	6.8	---	---	---	6.7	6.6	6.6	7.0	6.6	6.8
15	6.9	6.6	6.8	---	---	---	6.7	6.6	6.7	6.8	6.6	6.7
16	6.9	6.6	6.8	---	---	---	6.8	6.6	6.7	6.8	6.7	6.7
17	6.9	6.6	6.8	6.7	6.4	6.6	6.9	6.6	6.7	6.7	6.7	6.7
18	6.9	6.6	6.7	6.8	6.6	6.7	6.9	6.6	6.7	6.7	6.7	6.7
19	6.9	6.6	6.7	6.8	6.7	6.8	7.0	6.6	6.8	6.7	6.6	6.7
20	6.9	6.6	6.7	---	---	---	6.9	6.6	6.8	6.7	6.6	6.6
21	6.9	6.6	6.7	---	---	---	6.9	6.6	6.7	6.7	6.6	6.6
22	6.9	6.5	6.7	6.9	6.7	6.8	6.9	6.6	6.7	6.7	6.5	6.6
23	6.9	6.5	6.7	6.8	6.7	6.8	6.9	6.6	6.7	6.7	6.5	6.6
24	7.0	6.6	6.8	6.8	6.7	6.7	6.9	6.6	6.7	---	---	---
25	7.0	6.6	6.8	6.8	6.7	6.7	6.9	6.6	6.7	---	---	---
26	7.1	6.6	6.8	6.8	6.7	6.8	6.9	6.6	6.8	---	---	---
27	6.9	6.5	6.7	---	---	---	7.0	6.7	6.8	---	---	---
28	7.0	6.6	6.8	---	---	---	7.0	6.7	6.9	---	---	---
29	---	---	---	6.8	6.7	6.7	7.0	6.7	6.9	---	---	---
30	---	---	---	6.7	6.7	6.7	7.0	6.7	6.8	---	---	---
31	---	---	---	6.7	6.7	6.7	---	---	---	6.3	6.2	6.3
MONTH	7.1	6.4	6.8	7.1	6.4	6.8	7.0	6.5	6.7	7.1	6.2	6.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.3	6.2	6.2	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
2	6.4	6.2	6.3	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
3	6.4	6.2	6.3	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
4	6.3	6.2	6.2	6.9	6.5	6.7	7.0	6.8	6.9	---	---	---
5	6.4	6.2	6.3	6.9	6.5	6.7	6.9	6.7	6.8	6.9	6.5	6.7
6	6.4	6.2	6.3	6.8	6.4	6.6	6.9	6.7	6.8	6.9	6.5	6.7
7	6.5	6.2	6.3	6.8	6.4	6.6	6.9	6.7	6.8	6.9	6.5	6.7
8	6.4	6.1	6.3	6.8	6.4	6.6	6.9	6.7	6.8	7.0	6.5	6.8
9	6.4	6.2	6.3	6.8	6.4	6.6	7.0	6.6	6.8	7.0	6.6	6.8
10	6.4	6.2	6.3	6.8	6.4	6.6	7.0	6.6	6.8	7.1	6.6	6.9
11	6.5	6.2	6.3	6.8	6.4	6.7	7.0	6.6	6.8	7.1	6.7	6.9
12	6.5	6.3	6.3	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.9
13	6.5	6.3	6.4	7.0	6.5	6.7	6.9	6.5	6.7	7.2	6.7	6.9
14	6.5	6.3	6.4	6.9	6.5	6.8	6.9	6.5	6.7	7.1	6.8	7.0
15	6.6	6.3	6.4	6.9	6.5	6.7	6.9	6.5	6.7	7.1	6.7	6.9
16	6.8	6.3	6.4	6.9	6.6	6.7	6.9	6.5	6.7	7.0	6.6	6.8
17	6.7	6.3	6.4	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.8
18	6.7	6.3	6.4	6.9	6.5	6.7	6.9	6.6	6.8	7.0	6.6	6.8
19	6.7	6.3	6.4	6.9	6.5	6.7	7.0	6.6	6.8	7.0	6.6	6.8
20	6.7	6.3	6.5	6.9	6.6	6.8	7.0	6.6	6.8	7.0	6.6	6.9
21	6.8	6.3	6.5	7.0	6.6	6.8	7.1	6.7	6.9	7.0	6.6	6.8
22	6.8	6.3	6.5	6.9	6.6	6.8	7.1	6.7	7.0	6.9	6.6	6.8
23	6.7	6.3	6.5	7.0	6.7	6.8	7.1	6.7	6.9	7.1	6.6	6.9
24	6.7	6.3	6.5	7.0	6.7	6.9	7.1	6.8	6.9	7.0	6.7	6.9
25	6.7	6.3	6.5	7.0	6.8	6.9	7.2	6.6	7.0	7.0	6.6	6.8
26	6.7	6.3	6.5	7.0	6.8	6.9	7.1	6.8	7.0	7.1	6.6	6.8
27	6.8	6.4	6.6	7.1	6.8	6.9	7.2	6.8	7.0	7.0	6.6	6.8
28	6.9	6.4	6.6	7.0	6.8	6.9	7.1	6.8	6.9	7.0	6.6	6.8
29	6.9	6.4	6.6	7.1	6.8	6.9	7.0	6.5	6.8	7.1	6.6	6.9
30	6.9	6.4	6.7	7.0	6.8	6.9	6.9	6.5	6.7	7.1	6.7	6.9
31	---	---	---	7.0	6.8	6.9	6.8	6.5	6.7	---	---	---
MONTH	6.9	6.1	6.4	7.1	6.4	6.8	7.2	6.5	6.8	7.2	6.5	6.8

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.5	22.0	22.5	14.0	13.5	13.5	8.5	8.0	8.5	---	---	---
2	22.5	22.0	22.5	14.0	14.0	14.0	8.5	8.0	8.5	---	---	---
3	22.0	21.5	22.0	14.5	14.0	14.5	8.5	8.0	8.5	---	---	---
4	21.5	20.5	21.0	15.0	14.5	15.0	8.5	8.0	8.0	---	---	---
5	21.0	20.5	20.5	15.5	14.5	15.0	8.0	7.5	8.0	---	---	---
6	20.5	19.5	20.0	15.0	15.0	15.0	8.0	7.5	7.5	3.5	3.0	3.0
7	20.0	19.5	19.5	15.5	15.0	15.0	7.5	6.0	6.5	3.5	3.0	3.0
8	19.5	19.0	19.0	15.5	15.0	15.0	6.5	5.0	6.0	4.0	3.0	3.5
9	19.0	19.0	19.0	15.5	15.0	15.5	6.0	5.0	5.5	4.5	3.0	3.5
10	19.0	18.0	18.5	16.0	15.5	15.5	5.5	4.5	5.0	3.5	2.5	3.0
11	18.5	17.5	18.0	15.5	14.5	15.0	4.5	3.5	4.0	3.0	2.5	3.0
12	18.5	17.5	18.0	14.5	14.0	14.5	4.5	3.0	4.0	3.5	2.0	2.5
13	17.5	17.0	17.0	14.0	13.0	13.5	4.5	3.0	4.0	3.0	2.0	2.5
14	17.0	16.0	16.5	13.0	12.5	12.5	5.0	3.5	4.0	3.0	2.0	2.5
15	16.0	15.5	16.0	12.5	12.0	12.5	5.0	4.0	4.5	2.5	1.5	2.0
16	16.0	15.5	16.0	13.0	12.0	12.5	5.0	4.5	4.5	2.0	1.5	1.5
17	15.5	14.5	15.0	13.0	12.5	12.5	5.0	4.5	4.5	1.5	1.0	1.5
18	15.0	14.5	14.5	12.5	12.0	12.0	5.0	4.5	4.5	1.5	1.5	1.5
19	15.0	14.5	14.5	12.0	11.5	11.5	---	---	---	2.0	1.0	1.5
20	14.5	14.0	14.5	11.5	11.0	11.5	4.5	4.0	4.5	1.5	1.0	1.0
21	14.5	13.5	14.0	11.5	11.0	11.0	4.5	4.0	4.5	1.5	1.0	1.0
22	14.5	13.5	14.0	11.5	11.0	11.0	---	---	---	2.0	1.0	1.5
23	14.0	13.5	14.0	11.0	10.5	11.0	---	---	---	2.0	1.0	1.5
24	14.0	13.0	13.5	11.0	10.5	10.5	---	---	---	2.0	1.0	1.5
25	14.0	13.0	13.5	10.5	10.0	10.5	---	---	---	2.0	1.0	1.5
26	14.0	13.0	13.5	10.5	9.0	10.0	---	---	---	2.5	1.5	2.0
27	14.5	13.5	14.0	9.0	8.5	9.0	---	---	---	2.5	1.5	2.0
28	14.5	13.5	14.0	8.5	8.5	8.5	---	---	---	2.0	1.5	1.5
29	14.5	13.5	14.0	8.5	8.0	8.0	---	---	---	1.5	1.0	1.5
30	14.5	13.5	14.0	8.5	7.5	8.0	---	---	---	2.0	1.0	1.5
31	14.0	13.5	14.0	---	---	---	---	---	---	1.5	1.0	1.5
MONTH	22.5	13.0	16.5	16.0	7.5	12.5	8.5	3.0	6.0	4.5	1.0	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.5	1.0	1.5	8.0	2.5	4.0	9.0	8.0	8.5	13.5	13.0	13.5
2	1.5	1.0	1.5	4.0	2.0	3.0	9.5	8.5	9.0	14.0	13.0	13.5
3	1.5	1.0	1.5	4.5	2.5	3.0	9.0	8.5	9.0	14.5	13.5	14.0
4	2.0	1.0	1.5	4.5	2.0	3.0	9.5	8.5	9.0	14.0	13.5	14.0
5	1.5	1.0	1.0	6.0	2.5	3.5	10.0	9.0	9.5	13.5	13.5	13.5
6	1.5	1.0	1.0	6.5	2.0	3.5	10.0	9.5	9.5	13.5	13.0	13.5
7	1.5	1.0	1.0	9.5	2.5	4.0	10.5	9.5	10.0	14.5	13.0	13.5
8	1.5	1.0	1.0	6.5	2.0	3.5	10.5	10.0	10.5	14.0	13.5	13.5
9	1.5	1.0	1.0	5.0	2.0	3.5	10.5	10.0	10.5	14.5	13.5	14.0
10	1.5	1.0	1.5	6.5	2.5	4.0	11.0	10.0	10.5	14.5	14.0	14.5
11	1.5	1.0	1.5	9.5	2.5	5.0	11.0	10.5	11.0	15.5	14.0	14.5
12	2.0	1.0	1.5	---	---	---	11.5	10.5	11.0	15.5	15.0	15.0
13	2.0	1.0	1.5	---	---	---	12.0	11.0	11.5	16.0	15.5	15.5
14	1.5	1.0	1.5	---	---	---	12.0	11.0	11.5	16.0	15.5	16.0
15	2.0	1.0	1.5	---	---	---	12.0	11.5	11.5	16.0	15.5	16.0
16	2.0	1.0	1.5	---	---	---	12.0	11.0	11.5	16.0	15.5	16.0
17	2.5	1.5	2.0	6.5	5.5	6.0	12.0	11.5	11.5	16.5	15.5	16.0
18	2.5	1.5	2.0	6.0	5.5	6.0	12.5	11.5	12.0	16.5	16.0	16.0
19	2.5	1.5	2.0	6.0	5.5	6.0	12.0	11.5	12.0	17.0	16.0	16.5
20	2.5	1.5	2.0	---	---	---	12.5	12.0	12.0	17.5	16.5	17.0
21	2.5	1.5	2.0	---	---	---	12.5	12.0	12.0	18.0	17.0	17.5
22	2.5	2.0	2.0	8.0	7.0	7.5	12.5	12.0	12.0	18.0	17.0	17.5
23	2.5	1.5	2.0	8.5	7.5	7.5	13.0	12.0	12.5	18.5	17.0	18.0
24	2.5	1.5	2.0	8.5	8.0	8.0	13.0	12.5	13.0	---	---	---
25	3.5	1.5	2.5	8.0	7.5	8.0	13.5	12.5	13.0	---	---	---
26	8.5	2.5	4.0	7.5	7.5	7.5	13.5	13.0	13.0	---	---	---
27	11.0	3.5	6.5	---	---	---	13.0	12.5	12.5	---	---	---
28	10.0	3.5	5.5	---	---	---	13.5	12.5	13.0	---	---	---
29	---	---	---	8.0	7.5	7.5	13.5	12.5	13.0	---	---	---
30	---	---	---	8.0	7.0	7.5	14.0	13.5	13.5	---	---	---
31	---	---	---	8.5	7.5	8.0	---	---	---	21.5	21.0	21.0
MONTH	11.0	1.0	2.0	9.5	2.0	5.5	14.0	8.0	11.5	21.5	13.0	15.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.0	21.5	26.5	26.0	26.0	27.0	27.0	27.0	---	---	---
2	22.5	21.5	22.0	26.0	25.5	26.0	27.0	27.0	27.0	---	---	---
3	22.5	22.5	22.5	25.5	24.5	25.0	27.5	27.0	27.0	---	---	---
4	22.5	22.0	22.5	24.5	23.0	24.0	27.5	27.0	27.0	---	---	---
5	22.5	22.5	22.5	24.0	23.0	23.5	27.5	27.0	27.0	27.0	27.0	27.0
6	23.0	22.5	22.5	24.5	23.5	24.0	27.5	27.0	27.0	27.5	26.5	27.0
7	23.0	22.5	22.5	25.0	24.0	24.5	28.0	27.0	27.5	27.0	26.5	27.0
8	23.0	22.5	23.0	25.0	24.5	24.5	28.0	27.5	27.5	27.0	26.0	26.5
9	23.5	23.0	23.0	26.0	25.0	25.0	28.5	27.5	28.0	26.5	26.0	26.0
10	24.0	23.0	23.5	26.0	25.5	25.5	28.0	27.5	28.0	26.0	25.0	25.5
11	24.0	21.5	23.5	26.0	25.5	26.0	28.5	28.0	28.0	25.5	25.0	25.0
12	24.5	23.5	24.0	26.0	25.5	25.5	28.5	28.0	28.0	26.0	25.0	25.5
13	24.5	23.5	24.0	26.0	25.5	26.0	29.0	28.0	28.5	25.5	24.5	25.0
14	24.0	23.0	23.5	25.5	25.5	25.5	29.0	28.0	28.5	24.5	24.0	24.5
15	23.5	22.5	23.0	26.5	25.5	25.5	29.0	28.5	28.5	24.5	24.0	24.0
16	24.0	22.5	23.0	26.0	25.5	26.0	29.5	29.0	29.0	24.5	24.0	24.5
17	23.5	22.5	23.0	26.0	25.5	26.0	29.5	29.0	29.0	24.5	24.0	24.5
18	24.0	23.0	23.0	26.5	26.0	26.0	29.5	29.0	29.0	25.0	24.0	24.5
19	24.5	23.5	24.0	27.0	26.0	26.5	29.5	29.0	29.0	25.0	24.5	24.5
20	25.0	24.0	24.0	27.5	26.5	26.5	29.5	29.0	29.5	24.5	24.0	24.5
21	25.0	24.5	24.5	28.0	26.5	27.0	29.0	28.5	28.5	25.0	24.0	24.5
22	25.0	24.5	24.5	28.0	27.0	27.5	29.0	28.0	28.5	25.0	24.5	24.5
23	25.5	24.5	25.0	28.5	28.0	28.0	29.0	28.0	28.5	24.5	23.5	24.0
24	25.5	25.0	25.0	29.0	28.0	28.5	29.0	28.5	28.5	24.0	23.5	23.5
25	26.0	25.0	25.5	28.5	28.0	28.0	29.0	28.0	28.5	24.0	23.5	23.5
26	25.5	25.0	25.5	28.5	27.5	28.0	28.5	28.0	28.0	23.5	22.5	23.0
27	26.0	25.0	25.5	28.5	27.5	28.0	28.0	27.5	28.0	23.0	22.5	22.5
28	26.5	25.5	26.0	28.5	27.5	28.0	28.0	27.5	27.5	23.0	22.0	22.5
29	26.5	26.0	26.0	28.0	27.5	27.5	28.0	27.0	27.5	22.0	21.5	22.0
30	26.5	26.0	26.5	28.0	27.5	27.5	28.0	27.5	28.0	22.0	21.0	21.5
31	---	---	---	27.5	27.0	27.5	28.0	27.5	28.0	---	---	---
MONTH	26.5	21.0	24.0	29.0	23.0	26.0	29.5	27.0	28.0	27.5	21.0	24.5

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.1	1.4	3.0	8.4	7.4	7.8	9.9	8.3	9.0	---	---	---
2	4.1	1.7	2.8	8.4	7.5	7.9	9.0	8.3	8.6	---	---	---
3	4.1	1.8	2.7	8.5	7.4	7.9	8.7	8.3	8.5	---	---	---
4	4.8	2.5	3.5	8.1	7.2	7.6	8.7	8.4	8.5	---	---	---
5	5.4	3.1	3.9	7.6	6.4	7.2	9.1	8.6	8.8	---	---	---
6	5.0	3.3	4.1	8.4	6.7	7.6	9.5	8.7	9.0	12.1	11.3	11.7
7	5.5	3.5	4.3	8.7	7.6	8.2	10.7	9.3	10.2	12.4	11.3	11.8
8	6.6	3.6	4.8	8.6	7.1	7.8	11.4	10.5	10.7	12.4	11.3	11.8
9	6.5	4.0	5.3	8.0	5.6	6.9	11.6	10.6	10.9	12.3	11.6	11.9
10	6.1	4.0	5.0	7.2	5.4	6.2	11.6	11.0	11.2	12.6	11.7	12.0
11	6.0	3.8	4.8	6.9	5.4	6.0	12.3	11.0	11.5	12.9	12.0	12.4
12	5.6	3.5	4.5	6.8	5.5	6.0	12.4	11.0	11.6	12.6	12.3	12.5
13	6.4	3.6	4.8	7.2	5.8	6.5	12.4	11.0	11.7	12.6	12.2	12.4
14	8.1	4.2	6.3	7.7	6.6	7.0	12.3	10.8	11.5	12.9	12.5	12.7
15	8.0	5.3	6.6	7.8	6.7	7.2	11.9	10.5	11.2	12.8	12.5	12.6
16	8.0	5.2	6.5	7.7	6.9	7.2	11.3	10.0	10.7	12.8	12.6	12.7
17	7.3	5.9	6.6	7.8	6.9	7.3	10.9	9.8	10.3	12.9	12.6	12.7
18	7.7	6.5	6.9	8.7	7.0	7.5	10.4	9.8	10.0	12.9	12.7	12.8
19	7.1	6.2	6.6	8.4	7.5	7.9	---	---	---	12.9	12.8	12.8
20	7.0	6.2	6.6	8.8	7.7	8.1	11.6	11.0	11.3	13.3	12.8	13.1
21	7.2	6.5	6.9	8.6	7.7	8.1	12.1	11.1	11.5	13.1	12.7	13.0
22	7.5	6.6	6.8	8.2	7.4	7.8	---	---	---	13.0	12.4	12.8
23	7.6	6.7	7.0	9.0	7.7	8.2	---	---	---	12.8	12.1	12.6
24	7.6	6.9	7.0	8.6	7.3	8.0	---	---	---	12.7	11.8	12.3
25	7.1	6.6	6.9	8.7	7.2	8.0	---	---	---	12.5	11.7	12.1
26	7.1	6.6	6.9	8.7	7.4	8.1	---	---	---	12.9	12.0	12.3
27	7.2	6.8	7.0	9.1	7.9	8.5	---	---	---	13.0	12.2	12.5
28	6.9	6.6	6.8	9.4	8.2	8.8	---	---	---	13.1	12.7	12.9
29	7.6	6.7	7.1	9.4	8.2	8.7	---	---	---	13.1	12.8	13.0
30	8.1	7.3	7.5	9.9	8.4	9.0	---	---	---	13.0	12.8	13.0
31	8.0	7.2	7.5	---	---	---	---	---	---	13.0	12.8	12.9
MONTH	8.1	1.4	5.7	9.9	5.4	7.6	12.4	8.3	10.3	13.3	11.3	12.5

01482100 DELAWARE RIVER AT DELAWARE MEMORIAL BRIDGE, NEAR WILMINGTON, DE--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.0	12.8	12.9	10.7	6.3	9.3	11.3	10.8	11.0	8.8	6.7	7.9
2	12.9	12.7	12.8	10.6	7.5	9.3	11.0	10.6	10.8	9.0	4.9	7.7
3	12.8	12.5	12.7	10.5	7.3	9.2	10.9	10.3	10.6	8.7	6.3	7.8
4	12.7	12.3	12.6	10.6	7.2	9.1	10.7	10.0	10.3	9.1	6.1	7.8
5	12.6	12.1	12.4	10.1	6.1	8.5	10.4	9.8	10.0	9.1	7.0	8.4
6	12.5	12.1	12.3	10.4	6.3	8.4	10.3	9.6	9.8	8.9	6.1	7.8
7	12.9	12.1	12.6	9.9	3.7	7.9	9.9	9.3	9.5	8.3	5.7	7.2
8	13.1	12.2	12.7	10.6	6.0	8.7	9.8	9.1	9.3	8.1	5.5	7.0
9	12.8	12.1	12.5	10.6	7.1	9.0	9.7	8.9	9.3	8.5	5.1	6.9
10	12.8	11.8	12.4	10.3	6.9	8.8	9.8	8.7	9.0	7.3	4.5	6.2
11	12.6	11.7	12.2	10.5	6.2	8.4	9.4	7.8	8.6	7.0	4.3	5.8
12	12.5	11.5	12.0	---	---	---	9.6	8.4	9.1	6.8	4.0	5.8
13	12.4	11.5	12.0	---	---	---	9.4	8.7	9.0	7.4	4.7	6.1
14	12.4	11.3	11.9	---	---	---	9.4	8.8	9.0	8.1	5.4	6.7
15	12.2	11.0	11.7	---	---	---	9.5	8.7	9.1	7.2	5.0	6.5
16	12.1	11.0	11.5	---	---	---	9.6	8.6	9.1	7.1	5.3	6.4
17	11.9	10.6	11.3	8.5	7.5	8.1	9.7	8.4	9.1	6.8	5.0	5.9
18	11.6	10.4	11.0	9.3	8.0	8.4	9.5	8.0	8.8	6.1	4.7	5.2
19	11.6	10.1	10.9	10.1	8.7	9.3	9.9	8.0	9.0	5.4	4.7	5.0
20	11.6	10.0	10.8	---	---	---	9.2	7.8	8.7	5.3	4.8	5.0
21	11.7	9.6	10.6	---	---	---	9.2	7.4	8.3	5.8	4.9	5.3
22	11.2	9.3	10.4	9.8	9.4	9.6	8.9	7.1	8.0	6.0	5.4	5.7
23	11.6	9.2	10.4	9.6	9.1	9.3	9.1	6.7	7.9	6.1	5.5	5.7
24	12.0	9.5	10.8	9.5	9.0	9.2	8.8	6.3	7.6	---	---	---
25	11.8	9.5	10.8	9.6	9.3	9.5	8.5	6.3	7.5	---	---	---
26	11.8	6.9	9.8	10.1	9.6	9.8	8.7	6.3	7.8	---	---	---
27	10.4	3.5	7.9	---	---	---	9.2	7.4	8.5	---	---	---
28	10.6	4.5	8.4	---	---	---	9.3	7.3	8.5	---	---	---
29	---	---	---	11.9	11.4	11.6	9.1	7.1	8.3	---	---	---
30	---	---	---	11.7	11.4	11.5	8.8	6.6	8.0	---	---	---
31	---	---	---	11.5	11.1	11.3	---	---	---	6.0	3.7	4.9
MONTH	13.1	3.5	11.4	11.9	3.7	9.3	11.3	6.3	9.0	9.1	3.7	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	5.9	3.1	4.5	5.9	2.2	4.4	6.0	3.8	4.9	---	---	---
2	6.5	2.8	4.3	5.4	2.2	4.0	5.5	3.5	4.5	---	---	---
3	5.8	2.4	4.1	5.4	2.1	4.2	5.3	3.3	4.4	---	---	---
4	5.2	2.0	3.8	5.6	3.2	4.6	5.6	3.6	4.6	---	---	---
5	6.3	2.5	4.4	5.8	3.2	4.7	5.2	3.4	4.4	4.3	2.1	3.3
6	6.0	2.3	4.5	5.4	2.7	4.3	5.1	3.1	4.3	4.0	2.0	3.2
7	7.0	2.4	4.8	5.0	2.4	4.0	5.4	3.2	4.4	4.2	2.3	3.4
8	6.2	2.6	4.6	5.4	2.6	4.2	5.4	3.0	4.5	4.7	2.5	3.9
9	5.8	2.1	4.1	5.5	2.5	4.2	5.0	2.2	4.1	4.9	2.8	3.9
10	5.9	2.0	4.0	5.4	2.1	3.9	5.1	2.3	4.0	5.6	3.1	4.5
11	6.1	2.1	4.1	5.6	1.9	4.0	5.2	1.9	3.7	5.8	4.0	4.9
12	6.2	2.9	4.6	5.9	2.3	4.4	4.7	1.5	3.4	5.6	3.9	4.9
13	6.0	3.0	4.7	6.4	2.7	4.6	4.0	1.0	2.8	6.2	3.9	5.2
14	6.4	3.0	4.6	5.7	3.1	4.7	3.9	.7	2.3	6.0	4.5	5.3
15	7.3	3.8	5.2	5.7	2.9	4.5	4.3	.6	2.2	6.0	4.2	5.2
16	7.9	3.8	5.2	5.1	2.6	4.1	4.6	.8	2.6	5.7	3.9	4.9
17	6.7	3.8	5.1	5.0	2.2	3.6	4.6	1.4	2.9	5.7	3.7	4.8
18	6.7	3.3	4.7	4.7	1.8	3.2	4.6	1.4	3.0	5.5	3.4	4.7
19	6.5	3.1	4.4	4.5	1.6	3.0	4.7	1.6	3.2	5.4	3.3	4.6
20	6.2	2.8	4.3	4.7	2.0	3.5	4.5	1.8	3.3	5.4	3.4	4.6
21	6.2	2.7	4.2	5.0	2.1	3.7	5.6	2.7	4.2	5.3	3.3	4.5
22	5.8	2.4	3.9	4.8	2.2	3.6	5.3	2.9	4.4	4.9	3.0	4.2
23	5.5	1.9	3.5	4.5	2.2	3.5	5.4	2.7	4.3	5.7	3.3	4.8
24	5.1	1.6	3.4	5.0	2.3	3.6	5.3	2.9	4.2	5.5	3.8	4.8
25	5.0	1.3	3.3	5.0	2.9	4.1	5.7	3.2	4.4	5.4	3.6	4.6
26	5.2	1.7	3.6	5.2	2.9	4.1	5.4	3.6	4.6	5.8	3.8	5.0
27	5.3	1.4	3.6	5.7	3.4	4.5	5.9	3.5	4.6	5.9	4.2	5.1
28	5.9	1.8	3.9	5.4	3.4	4.5	5.4	3.9	4.8	5.6	3.8	4.9
29	6.2	1.9	4.0	5.8	3.4	4.5	5.0	3.3	4.4	6.1	3.9	5.1
30	6.2	2.0	4.2	5.9	3.8	4.8	4.8	2.9	3.0	6.2	4.3	5.3
31	---	---	---	6.0	4.2	5.0	4.7	2.6	3.7	---	---	---
MONTH	7.9	1.3	4.3	6.4	1.6	4.1	6.0	.6	3.9	6.2	2.0	4.6

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE

LOCATION.--Lat 39°30'03", long 75°34'07", New Castle County, Hydrologic Unit 02040205, water-quality recorder located on platform about 0.4 mi (0.6 km) downstream from Reedy Island near Port Penn.

DRAINAGE AREA.--11,200 mi² (29,100 km²), approximately.

PERIOD OF RECORD.--October 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1963 to current year.
pH: February 1970 to current year.
WATER TEMPERATURES: February 1970 to current year.
DISSOLVED OXYGEN: February 1970 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 35,400 micromhos Nov. 7, 1963; minimum, 100 micromhos on several days in August 1969, April 1970, and February 1974.
pH: Maximum, 8.8 Aug. 29, Sept. 2, 1973; minimum, 5.4 Dec. 31, 1972.
WATER TEMPERATURES: Maximum, 29.5°C Aug. 5, 1975; minimum, freezing point on many days during winter period
DISSOLVED OXYGEN: Maximum, 17.1 mg/L Dec. 16, 19, 1976; minimum, 0.3 mg/L Sept. 16, 17, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9440	4360	6290	6840	2800	4350	4400	520	2080	5400	530	2040
2	8200	3600	5080	6800	2960	4360	3400	320	1360	5360	527	1810
3	7800	3360	4670	6800	2960	4720	3040	160	920	2840	433	985
4	9880	3360	5980	7920	3200	4860	---	---	---	4440	409	1440
5	11200	3800	7160	7600	3200	4800	---	---	---	4200	365	1650
6	12200	4000	7810	9120	3600	5870	---	---	---	6160	400	2210
7	12600	3800	8030	9920	4560	6840	---	---	---	8160	560	3290
8	14800	5240	9570	11300	2960	6590	---	---	---	8600	1360	3940
9	14200	6400	9840	6520	2240	4030	---	---	---	6200	1000	3330
10	12200	4360	7550	5000	2400	3350	---	---	---	---	---	---
11	11200	4000	7060	3640	1520	2650	---	---	---	---	---	---
12	11200	3960	6370	2640	1720	2230	---	---	---	---	---	---
13	11200	3760	6210	2960	880	1870	---	---	---	---	---	---
14	14400	5160	8660	3360	880	1630	---	---	---	---	---	---
15	11200	4040	7760	3600	800	1550	---	---	---	---	---	---
16	11200	4320	6580	2640	720	1260	---	---	---	---	---	---
17	7200	2800	4460	2880	920	1370	---	---	---	---	---	---
18	6600	2720	3550	1440	560	1160	---	---	---	---	---	---
19	6960	2400	3460	1320	720	1000	---	---	---	---	---	---
20	5240	2000	3370	2920	560	1120	---	---	---	---	---	---
21	7800	2000	3880	3600	600	1560	---	---	---	---	---	---
22	6040	1920	3440	2160	440	1160	---	---	---	---	---	---
23	6800	1600	3130	4320	720	1900	604	401	476	---	---	---
24	4840	1600	3140	5480	760	2600	649	340	492	---	---	---
25	5000	1560	2830	5120	840	2320	450	305	398	---	---	---
26	5000	1600	2760	4760	1000	2560	421	255	353	---	---	---
27	4800	1600	2940	2000	400	1200	2800	258	614	---	---	---
28	5000	1680	2850	1240	160	600	2000	253	464	---	---	---
29	6760	1800	3480	2600	160	760	2280	251	426	---	---	---
30	7160	2560	4570	4040	320	1440	2160	257	510	---	---	---
31	7640	3160	4470	---	---	---	3160	246	810	---	---	---
MONTH	14800	1560	5390	11300	160	2720	4400	160	742	8600	365	2300

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	13200	5240	8510	304	174	208	9800	4560	6130
2	---	---	---	11800	5400	7690	439	174	311	10300	4360	6130
3	---	---	---	13600	4840	8470	295	194	246	11000	4440	6470
4	---	---	---	---	---	---	241	201	220	11200	4560	6260
5	---	---	---	---	---	---	229	174	214	11600	4440	7670
6	---	---	---	---	---	---	205	180	197	11600	4440	7220
7	---	---	---	---	---	---	---	---	---	10000	4360	6240
8	---	---	---	---	---	---	---	---	---	9800	4320	6040
9	---	---	---	---	---	---	---	---	---	10400	4000	5950
10	---	---	---	---	---	---	---	---	---	8320	3360	4930
11	---	---	---	---	---	---	---	---	---	7800	3000	4600
12	---	---	---	---	---	---	---	---	---	7640	3240	4800
13	---	---	---	---	---	---	---	---	---	7000	3400	4800
14	---	---	---	---	---	---	---	---	---	6840	3360	4860
15	---	---	---	---	---	---	5960	560	3570	6800	2600	4130
16	---	---	---	---	---	---	8600	1800	5000	5560	1400	3150
17	---	---	---	---	---	---	10800	4440	7370	5200	1240	2560
18	---	---	---	---	---	---	10000	4760	6830	2440	840	1550
19	---	---	---	---	---	---	11200	4720	7420	2760	560	1110
20	---	---	---	---	---	---	11000	5160	7340	2360	560	913
21	---	---	---	7800	2720	4860	8560	4440	6030	1240	560	760
22	---	---	---	5760	1760	3550	8720	4000	5500	1760	560	753
23	12300	4560	7190	4840	960	2720	8840	4000	5400	2320	440	797
24	14600	4560	8680	3960	830	1830	8600	3920	5350	2440	400	809
25	14000	4840	8810	3000	544	1330	8400	3960	5230	1360	400	564
26	13200	5200	8800	2720	549	1150	8400	4160	5400	1240	200	493
27	12000	4440	7470	2040	311	681	8840	4800	6150	840	160	293
28	12600	4440	7950	---	---	---	11400	5200	7560	720	160	269
29	---	---	---	---	---	---	11200	4960	6890	440	160	233
30	---	---	---	---	---	---	9760	4720	6020	1400	160	379
31	---	---	---	255	190	219	---	---	---	1960	160	501
MONTH	14600	4440	8150	13600	190	3730	11400	174	4480	11600	160	3270

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4160	200	837	13800	4760	8120	18300	8800	12700	12700	4960	7510
2	4960	400	1290	14400	5200	8680	18400	9000	12600	13400	5200	8500
3	5000	440	1490	13400	6040	9170	18200	7600	11300	13400	5520	8580
4	5240	400	1620	13400	4800	7850	14000	6960	9440	12600	5240	8310
5	5640	760	2550	13900	4880	8910	13400	6800	9020	13800	5920	9030
6	6600	760	2550	14000	5120	8300	14000	6760	9310	13600	6040	9400
7	7360	1120	2820	13200	4960	7540	13400	6400	8900	13600	6000	9060
8	6360	1000	2620	12000	4560	7310	11600	4960	7780	14400	6040	9280
9	5120	1000	2060	12000	4560	7220	10200	4560	6850	14600	6200	9780
10	4800	840	1870	11600	3960	7320	10600	4600	7070	16200	6800	10100
11	6040	840	2500	11200	3920	6970	12000	4560	7140	13400	7240	10200
12	5640	960	2270	13200	4840	8410	12000	4720	7430	12000	5360	8230
13	5520	1160	2270	14200	5400	8950	11200	4440	6830	15800	5120	8390
14	5000	720	2010	14000	5600	8970	11800	4160	6650	17200	7160	10700
15	8360	800	3490	14200	5200	8800	12400	4200	6680	14600	7760	10900
16	10400	1240	4620	15800	5520	9140	13500	4400	7040	15200	7360	10500
17	11100	2440	5600	16200	6160	9790	13100	4600	7260	15600	7200	10500
18	10800	2760	5410	15000	6160	9510	13000	4560	7320	16400	7600	11000
19	10400	2840	5170	16200	6400	9500	13200	5120	7930	15600	7920	11000
20	10700	2960	5710	16000	6560	9540	13400	5200	8260	16400	8200	11800
21	11400	3640	6310	15200	7120	9990	14000	5600	8740	14800	8200	10900
22	11200	3640	6150	15800	7200	10400	14800	6360	9920	13400	7200	9470
23	10800	3640	6180	15900	7640	11000	13800	6720	9840	16400	7200	11500
24	10600	3760	6320	16000	7640	11000	13800	6800	9520	15800	8600	12200
25	10400	4000	6490	16600	8200	11600	16000	6840	9950	16000	8200	11200
26	10600	4440	6690	15900	8200	11500	15500	7240	11000	18300	8200	12400
27	9600	4200	6380	15600	8840	11900	15400	7760	10800	19800	9360	14300
28	9520	4200	6190	29800	8160	11300	13100	6720	9530	19200	10200	14200
29	11200	4040	6570	17600	7640	11200	12800	5520	8120	20800	10000	14500
30	12200	4360	7220	17000	8400	11700	13000	5000	7600	20600	10600	14800
31	---	---	---	18600	8160	12700	12600	5240	8160	---	---	---
MONTH	12200	200	4110	29800	3920	9490	18400	4160	8730	20800	4960	10600

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.2	7.3	7.3	7.0	7.1	7.2	6.7	6.9	7.4	6.9	7.2
2	7.4	7.2	7.3	7.3	7.0	7.1	7.0	6.6	6.8	7.4	7.0	7.1
3	7.5	7.2	7.3	7.4	7.0	7.2	6.9	6.5	6.7	7.3	6.9	7.1
4	7.6	7.2	7.4	7.3	7.0	7.2	6.8	6.5	6.6	7.4	6.9	7.1
5	7.6	7.3	7.5	7.3	6.9	7.1	7.1	6.5	6.8	7.4	7.0	7.2
6	7.6	7.3	7.5	7.4	7.0	7.2	7.0	6.6	6.7	7.5	7.0	7.2
7	7.7	7.3	7.5	7.5	7.2	7.4	---	---	---	7.6	7.1	7.3
8	7.8	7.3	7.5	7.6	7.0	7.3	---	---	---	7.6	7.1	7.4
9	7.7	7.4	7.5	7.3	6.7	7.0	---	---	---	7.5	7.2	7.4
10	7.6	7.4	7.5	7.1	6.7	6.9	---	---	---	---	---	---
11	7.6	7.3	7.4	7.0	6.6	6.9	---	---	---	---	---	---
12	7.6	7.3	7.4	6.8	6.7	6.8	---	---	---	---	---	---
13	7.6	7.3	7.4	7.2	6.7	6.8	---	---	---	---	---	---
14	7.7	7.4	7.6	7.0	6.7	6.8	---	---	---	---	---	---
15	7.7	7.4	7.6	7.0	6.7	6.8	---	---	---	---	---	---
16	7.7	7.4	7.5	6.9	6.7	6.7	---	---	---	---	---	---
17	7.8	7.4	7.5	6.9	6.7	6.7	---	---	---	---	---	---
18	7.7	7.3	7.4	7.3	6.7	6.8	---	---	---	---	---	---
19	7.6	7.3	7.4	7.3	6.8	6.9	---	---	---	---	---	---
20	7.5	7.0	7.3	7.0	6.8	6.8	---	---	---	---	---	---
21	7.5	6.9	7.2	7.0	6.8	6.9	---	---	---	---	---	---
22	7.3	6.8	7.1	6.9	6.7	6.8	---	---	---	---	---	---
23	7.3	6.8	7.0	7.2	6.8	6.9	7.0	6.8	6.9	---	---	---
24	7.2	6.8	7.0	7.2	6.8	6.9	7.0	6.8	6.9	---	---	---
25	7.2	6.7	6.9	7.2	6.7	6.9	6.9	6.8	6.9	---	---	---
26	7.1	6.7	6.9	7.2	6.8	7.0	7.0	6.8	6.9	---	---	---
27	7.1	6.7	6.9	7.2	6.7	6.9	7.3	6.9	7.0	---	---	---
28	7.1	6.7	6.8	7.0	6.7	6.8	7.1	6.8	6.9	---	---	---
29	7.3	6.7	6.9	7.0	6.7	6.8	7.2	6.8	6.9	---	---	---
30	7.3	6.9	7.1	7.2	6.7	6.9	7.2	6.8	6.9	---	---	---
31	7.4	7.0	7.1	---	---	---	7.3	6.8	7.0	---	---	---
MONTH	7.8	6.7	7.3	7.6	6.6	6.9	7.3	6.5	6.9	7.6	6.9	7.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.8	7.5	7.6	6.7	6.5	6.6	7.4	7.0	7.1
2	---	---	---	7.7	7.5	7.6	6.8	6.5	6.7	7.5	7.0	7.2
3	---	---	---	7.8	7.5	7.6	6.7	6.6	6.7	7.5	7.0	7.2
4	---	---	---	---	---	---	6.7	6.6	6.6	7.5	7.0	7.2
5	---	---	---	---	---	---	6.7	6.5	6.6	7.5	7.1	7.3
6	---	---	---	---	---	---	6.6	6.5	6.6	7.5	7.1	7.2
7	---	---	---	---	---	---	6.6	6.5	6.6	7.4	7.0	7.1
8	---	---	---	---	---	---	6.6	6.5	6.5	7.3	7.0	7.1
9	---	---	---	---	---	---	6.6	6.5	6.6	7.4	7.0	7.1
10	---	---	---	---	---	---	6.6	6.5	6.5	7.2	6.9	7.0
11	---	---	---	---	---	---	6.5	6.5	6.5	7.2	6.9	7.0
12	---	---	---	---	---	---	6.6	6.5	6.5	7.2	6.8	7.0
13	---	---	---	---	---	---	6.6	6.5	6.6	7.1	6.9	7.0
14	---	---	---	---	---	---	7.0	6.5	6.7	7.2	7.0	7.1
15	---	---	---	---	---	---	7.3	6.7	7.0	7.2	6.9	7.1
16	---	---	---	---	---	---	7.6	6.9	7.2	7.1	6.8	7.0
17	---	---	---	---	---	---	7.7	7.1	7.4	7.0	6.7	6.9
18	---	---	---	---	---	---	7.6	7.1	7.3	6.8	6.6	6.8
19	---	---	---	---	---	---	7.6	7.1	7.3	6.8	6.5	6.7
20	---	---	---	---	---	---	7.5	7.1	7.3	6.7	6.5	6.6
21	---	---	---	7.3	7.0	7.1	7.3	7.0	7.2	6.7	6.5	6.6
22	---	---	---	7.2	6.9	7.0	7.3	7.0	7.1	6.7	6.5	6.6
23	7.8	7.4	7.6	7.1	6.9	6.9	7.3	6.9	7.1	6.7	6.5	6.6
24	7.8	7.4	7.6	7.0	6.8	6.9	7.3	6.9	7.0	6.7	6.5	6.6
25	7.8	7.4	7.6	7.0	6.8	6.9	7.2	6.8	7.0	6.6	6.4	6.5
26	7.8	7.5	7.6	7.0	6.8	6.9	7.3	6.9	7.0	6.6	6.4	6.5
27	7.7	7.4	7.6	7.0	6.7	6.8	7.3	7.0	7.2	6.6	6.4	6.5
28	7.8	7.5	7.6	6.7	6.6	6.7	7.5	7.1	7.2	6.6	6.3	6.5
29	---	---	---	6.7	6.6	6.7	7.5	7.1	7.2	6.6	6.4	6.4
30	---	---	---	6.7	6.6	6.7	7.4	7.0	7.1	6.7	6.4	6.5
31	---	---	---	6.6	6.5	6.6	---	---	---	6.8	6.4	6.5
MONTH	7.8	7.4	7.6	7.8	6.5	7.0	7.7	6.5	6.9	7.5	6.3	6.9

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.9	6.4	6.6	7.5	7.1	7.3	7.3	7.1	7.2	7.3	7.0	7.1
2	7.0	6.4	6.6	7.5	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
3	7.0	6.5	6.7	7.4	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
4	7.1	6.4	6.7	7.4	7.1	7.2	7.3	7.1	7.2	7.2	7.0	7.1
5	7.1	6.6	6.9	7.4	7.1	7.2	7.3	7.1	7.2	7.3	7.0	7.1
6	7.1	6.7	6.9	7.4	7.0	7.2	7.3	7.1	7.2	7.3	7.0	7.1
7	7.2	6.7	6.9	7.3	7.0	7.1	7.3	7.0	7.2	7.3	7.0	7.1
8	7.2	6.7	6.9	7.4	7.0	7.2	7.2	7.0	7.1	7.4	7.0	7.2
9	7.1	6.7	6.9	7.4	7.0	7.2	7.2	7.0	7.1	7.3	7.1	7.2
10	7.1	6.7	6.9	7.3	7.0	7.2	7.2	7.0	7.1	7.4	7.1	7.2
11	7.2	6.7	6.9	7.3	7.0	7.1	7.3	7.0	7.1	7.4	7.2	7.3
12	7.2	6.7	7.0	7.3	7.0	7.2	7.3	7.0	7.1	7.3	7.1	7.2
13	7.2	6.8	7.0	7.5	7.1	7.2	7.2	7.0	7.1	7.5	7.1	7.3
14	7.2	6.7	7.0	7.4	7.1	7.2	7.3	6.9	7.0	7.5	7.2	7.3
15	7.5	6.9	7.1	7.4	7.0	7.2	7.3	6.9	7.0	7.4	7.2	7.3
16	7.7	6.9	7.2	7.3	7.0	7.1	7.3	6.9	7.1	7.4	7.1	7.2
17	7.5	7.1	7.2	7.3	6.9	7.1	7.3	6.9	7.1	7.4	7.1	7.2
18	7.5	7.0	7.2	7.3	6.9	7.0	7.3	6.9	7.1	7.4	7.1	7.2
19	7.4	6.9	7.1	7.2	6.8	7.0	7.3	6.9	7.1	7.3	7.1	7.2
20	7.5	6.9	7.2	7.3	6.9	7.0	7.3	7.0	7.1	7.3	7.1	7.2
21	7.5	7.0	7.2	7.2	6.9	7.0	7.4	7.1	7.2	7.3	7.1	7.2
22	7.5	6.9	7.2	7.2	6.9	7.0	7.4	7.0	7.2	7.2	7.1	7.1
23	7.4	6.9	7.1	7.2	6.9	7.0	7.3	7.0	7.2	7.4	7.1	7.3
24	7.4	7.0	7.2	7.2	6.9	7.1	7.3	7.1	7.2	7.3	7.2	7.3
25	7.5	7.0	7.2	7.3	7.0	7.1	7.4	7.1	7.2	7.4	7.1	7.2
26	7.4	7.0	7.2	7.3	7.0	7.2	7.4	7.1	7.2	7.5	7.2	7.3
27	7.3	7.0	7.2	7.3	7.1	7.2	7.4	7.1	7.2	7.6	7.2	7.4
28	7.3	7.0	7.2	7.2	7.1	7.2	7.3	7.1	7.2	7.5	7.3	7.4
29	7.5	7.1	7.2	7.3	7.1	7.2	7.3	7.1	7.1	7.5	7.3	7.4
30	7.5	7.0	7.2	7.4	7.1	7.2	7.3	7.0	7.1	7.5	7.3	7.4
31	---	---	---	7.4	7.1	7.2	7.3	7.0	7.1	---	---	---
MONTH	7.7	6.4	7.0	7.5	6.8	7.2	7.4	6.9	7.1	7.6	7.0	7.2

TEMPERATURE ($^{\circ}C$) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	21.5	22.0	14.5	14.0	14.5	8.5	8.0	8.5	3.5	3.0	3.0
2	22.0	21.5	22.0	15.0	14.0	14.5	8.5	8.0	8.5	3.5	3.0	3.0
3	21.5	20.5	21.0	15.0	14.5	15.0	8.5	8.0	8.5	3.0	2.0	2.5
4	20.5	19.5	20.0	15.5	15.0	15.5	8.5	8.0	8.0	3.0	2.0	2.5
5	20.5	19.5	20.0	16.0	15.0	15.5	8.0	7.5	8.0	3.0	2.0	2.5
6	20.0	19.5	19.5	16.0	15.5	15.5	8.0	7.5	8.0	3.0	2.5	2.5
7	20.0	19.0	19.5	15.5	15.5	15.5	---	---	---	3.0	2.5	3.0
8	19.0	18.5	19.0	16.0	15.5	15.5	---	---	---	3.5	3.0	3.0
9	19.0	18.5	19.0	16.0	15.5	15.5	---	---	---	4.0	2.5	3.5
10	18.5	18.0	18.5	16.0	15.5	15.5	---	---	---	---	---	---
11	18.5	18.0	18.0	15.5	14.5	15.0	---	---	---	---	---	---
12	18.5	17.5	18.0	14.5	14.0	14.0	---	---	---	---	---	---
13	18.0	17.0	17.0	14.0	12.5	13.0	---	---	---	---	---	---
14	17.0	15.5	16.5	13.0	11.5	12.0	---	---	---	---	---	---
15	16.0	15.5	16.0	12.5	12.0	12.0	---	---	---	---	---	---
16	16.0	15.5	15.5	12.5	11.5	12.0	---	---	---	---	---	---
17	16.0	13.5	15.0	12.5	12.0	12.0	---	---	---	---	---	---
18	16.5	14.0	14.5	12.5	11.5	12.0	---	---	---	---	---	---
19	14.5	14.0	14.5	14.5	11.0	11.5	---	---	---	---	---	---
20	14.5	14.0	14.0	12.0	10.5	11.0	---	---	---	---	---	---
21	15.0	14.0	14.0	11.0	11.0	11.0	---	---	---	---	---	---
22	15.0	14.0	14.5	11.5	10.5	11.0	---	---	---	---	---	---
23	15.0	14.0	14.5	11.0	10.5	10.5	5.0	4.5	5.0	---	---	---
24	14.5	14.0	14.5	11.0	10.5	11.0	5.5	4.5	5.0	---	---	---
25	15.0	14.0	14.5	10.5	10.5	10.5	5.0	4.5	5.0	---	---	---
26	14.5	14.5	14.5	10.5	9.5	10.0	4.5	4.0	4.5	---	---	---
27	15.0	14.5	15.0	10.0	8.0	9.0	4.0	3.0	3.5	---	---	---
28	15.5	15.0	15.0	8.5	7.5	8.5	4.0	3.0	3.5	---	---	---
29	15.5	14.5	15.0	8.5	7.5	8.0	3.5	2.5	3.0	---	---	---
30	15.0	14.5	15.0	8.5	7.5	8.0	3.5	2.5	3.0	---	---	---
31	15.0	14.0	14.5	---	---	---	3.5	3.0	3.0	---	---	---
MONTH	22.0	13.5	17.0	16.0	7.5	12.5	8.5	2.5	5.5	4.0	2.0	3.0

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	2.5	1.5	2.0	11.5	9.0	10.0	14.5	13.0	13.5
2	---	---	---	3.0	1.5	2.0	11.0	9.0	10.0	15.0	12.5	13.5
3	---	---	---	2.0	1.0	1.5	9.5	8.5	9.0	15.0	13.0	14.0
4	---	---	---	---	---	---	10.5	8.5	9.5	14.0	13.0	13.5
5	---	---	---	---	---	---	11.5	9.5	10.5	13.5	12.5	13.0
6	---	---	---	---	---	---	10.5	9.5	10.0	13.5	13.0	13.0
7	---	---	---	---	---	---	12.0	10.0	11.0	14.5	13.0	13.5
8	---	---	---	---	---	---	12.0	10.5	11.0	14.0	13.0	13.5
9	---	---	---	---	---	---	11.5	10.0	11.0	15.0	13.5	14.0
10	---	---	---	---	---	---	12.0	10.5	11.0	15.0	13.5	14.5
11	---	---	---	---	---	---	12.0	11.0	11.5	15.5	14.0	15.0
12	---	---	---	---	---	---	13.0	11.0	12.0	16.0	14.5	15.5
13	---	---	---	---	---	---	13.5	11.5	12.5	16.0	15.0	15.5
14	---	---	---	---	---	---	13.5	11.5	12.5	16.5	15.5	16.0
15	---	---	---	---	---	---	13.5	11.5	12.5	16.5	15.5	16.0
16	---	---	---	---	---	---	13.0	11.5	12.0	16.0	15.0	15.5
17	---	---	---	---	---	---	12.5	11.5	12.0	16.5	15.5	16.0
18	---	---	---	---	---	---	13.0	11.5	12.0	17.5	16.0	16.5
19	---	---	---	---	---	---	12.5	11.5	12.0	18.5	16.5	17.5
20	---	---	---	---	---	---	13.0	12.0	12.5	19.5	17.0	18.0
21	---	---	---	9.0	6.5	8.0	13.0	12.0	12.5	20.0	18.0	19.0
22	---	---	---	9.0	6.5	7.5	13.5	11.5	12.5	19.5	18.0	19.0
23	2.0	1.0	1.5	10.0	7.5	8.5	14.0	12.0	12.5	20.0	18.5	19.0
24	2.0	1.0	1.5	9.5	7.5	8.5	13.5	12.5	13.0	19.5	18.5	19.0
25	2.5	1.0	2.0	8.0	6.5	7.5	14.0	12.5	13.5	20.0	18.5	19.0
26	2.5	1.5	2.0	9.0	6.5	8.0	13.5	12.5	13.0	20.0	18.5	19.5
27	2.5	1.0	2.0	10.0	8.0	9.0	13.0	12.0	12.5	19.5	19.0	19.5
28	2.5	1.0	2.0	11.0	8.5	9.5	13.5	12.0	13.0	20.0	19.0	19.5
29	---	---	---	11.5	8.5	10.0	14.5	12.5	13.5	20.5	19.5	20.0
30	---	---	---	9.5	8.0	8.5	15.0	13.0	13.5	22.0	19.5	20.5
31	---	---	---	10.0	9.0	9.5	---	---	---	22.5	20.5	21.5
MONTH	2.5	1.0	2.0	11.5	1.0	7.0	15.0	8.5	12.0	22.5	12.5	16.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	21.0	22.0	27.0	25.0	26.0	27.5	26.5	27.0	27.5	26.5	27.0
2	23.5	21.5	22.5	25.5	24.5	25.5	27.0	26.5	27.0	28.0	26.5	27.0
3	23.0	22.0	22.5	24.5	23.5	24.5	28.0	26.5	27.0	27.5	26.5	27.0
4	23.5	21.5	22.5	24.0	23.5	23.5	27.5	26.5	27.0	27.5	26.0	27.0
5	23.0	22.0	22.5	25.0	22.5	23.5	27.5	26.5	27.0	27.5	26.0	26.5
6	23.5	21.5	22.5	25.5	23.0	24.0	27.5	26.5	27.0	27.5	26.0	27.0
7	23.0	22.0	22.5	25.5	23.5	24.5	28.0	26.5	27.5	27.5	26.5	27.0
8	23.5	22.5	23.0	25.5	24.0	25.0	28.5	27.0	28.0	27.0	25.5	26.0
9	24.0	22.5	23.5	26.5	24.5	25.5	29.0	27.5	28.0	26.5	25.0	26.0
10	24.0	22.5	23.5	26.5	25.0	26.0	29.0	27.5	28.0	25.5	24.0	25.0
11	24.5	22.5	23.5	26.5	25.0	25.5	28.5	27.5	28.0	25.5	24.5	25.0
12	24.5	23.0	24.0	26.5	25.0	25.5	29.0	28.0	28.0	26.5	24.5	25.5
13	24.5	22.5	23.5	26.5	25.0	25.5	29.0	28.0	28.5	25.0	23.5	24.5
14	23.5	22.5	23.0	25.5	25.0	25.0	29.5	28.0	28.5	24.5	23.5	24.0
15	23.5	22.0	22.5	26.5	25.0	25.5	29.5	28.0	29.0	24.5	23.5	24.0
16	24.0	22.0	22.5	26.0	25.0	25.5	30.0	28.5	29.0	25.0	23.5	24.0
17	23.0	21.5	22.0	26.5	25.0	25.5	30.0	28.5	29.0	24.5	23.5	24.0
18	24.0	21.5	22.5	27.5	25.0	26.0	30.0	28.5	29.0	25.5	23.5	24.5
19	25.0	22.5	23.5	27.0	25.5	26.0	30.5	28.5	29.0	25.0	23.5	24.0
20	25.0	23.0	24.0	27.5	25.5	26.5	29.5	28.5	29.0	24.5	23.5	24.0
21	25.0	23.0	24.0	28.0	26.0	27.0	29.0	27.0	28.0	25.0	23.5	24.0
22	25.5	23.5	24.5	28.5	26.5	27.5	29.0	27.5	28.5	25.0	23.0	24.0
23	25.5	24.0	24.5	29.0	27.0	28.0	29.0	27.5	28.5	24.5	23.0	23.5
24	25.5	24.0	25.0	29.0	27.5	28.0	29.0	28.0	28.5	24.5	22.5	23.5
25	26.0	24.5	25.0	28.0	27.0	27.5	28.5	27.0	28.0	24.0	22.0	23.0
26	25.5	24.5	25.0	28.5	27.0	27.5	28.5	27.0	27.5	23.0	21.5	22.0
27	26.5	25.0	25.5	28.5	27.0	27.5	28.0	26.5	27.5	23.0	21.5	22.0
28	27.0	25.0	26.0	28.5	26.5	27.5	28.5	26.5	27.5	23.0	21.0	22.0
29	27.5	25.5	26.0	28.5	27.0	27.5	28.5	27.0	28.0	22.5	20.0	21.0
30	27.5	25.5	26.5	28.0	26.5	27.5	28.0	27.5	27.5	22.0	20.5	21.5
31	---	---	---	28.0	26.5	27.0	28.0	26.5	27.5	---	---	---
MONTH	27.5	21.0	23.5	29.0	22.5	26.0	30.5	26.5	28.0	28.0	20.0	24.5

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.0	6.4	6.7	8.6	8.0	8.3	10.5	10.0	10.3	11.4	11.0	11.2
2	7.1	6.4	6.7	8.7	8.2	8.4	10.2	9.6	9.9	11.8	11.0	11.6
3	7.3	6.5	6.9	8.7	8.1	8.4	9.9	9.1	9.6	12.1	11.5	11.8
4	7.5	6.7	7.2	8.6	8.1	8.3	9.9	9.0	9.5	12.2	11.7	12.0
5	7.7	6.9	7.2	8.5	7.9	8.2	10.2	9.0	9.6	12.2	11.9	12.0
6	7.4	6.8	7.1	8.8	8.1	8.5	10.2	9.2	9.6	12.1	11.6	11.9
7	7.7	6.9	7.2	9.0	8.6	8.8	---	---	---	11.8	11.5	11.6
8	7.7	6.9	7.4	8.9	8.4	8.7	---	---	---	11.7	11.3	11.5
9	7.6	7.1	7.4	8.6	7.5	8.1	---	---	---	11.5	10.8	11.2
10	7.6	7.2	7.4	8.2	7.4	7.9	---	---	---	---	---	---
11	7.7	6.9	7.3	8.2	7.2	7.9	---	---	---	---	---	---
12	7.6	7.0	7.4	11.5	7.2	7.7	---	---	---	---	---	---
13	8.0	7.2	7.7	10.3	7.3	8.2	---	---	---	---	---	---
14	8.6	7.8	8.2	12.4	7.7	8.3	---	---	---	---	---	---
15	8.6	8.2	8.4	8.6	7.8	8.1	---	---	---	---	---	---
16	8.7	8.1	8.5	8.1	7.6	7.9	---	---	---	---	---	---
17	11.8	8.2	8.8	8.3	7.6	8.0	---	---	---	---	---	---
18	10.4	8.5	8.8	10.4	7.8	8.5	---	---	---	---	---	---
19	8.8	8.4	8.6	11.7	8.6	9.1	---	---	---	---	---	---
20	8.7	7.9	8.4	9.4	8.6	8.8	---	---	---	---	---	---
21	8.8	7.6	8.3	9.0	8.6	8.8	---	---	---	---	---	---
22	8.4	7.2	7.9	8.8	8.4	8.6	---	---	---	---	---	---
23	8.3	7.2	7.8	9.5	8.6	9.0	11.3	11.1	11.2	---	---	---
24	8.0	7.2	7.6	9.5	8.7	9.1	11.5	11.1	11.2	---	---	---
25	8.0	6.7	7.3	9.5	8.5	9.0	11.4	10.8	11.2	---	---	---
26	7.7	6.7	7.1	9.6	8.8	9.3	11.4	10.8	11.0	---	---	---
27	7.7	6.8	7.2	13.8	9.3	10.1	11.6	11.2	11.4	---	---	---
28	7.6	6.6	7.0	10.9	9.7	10.1	11.6	11.2	11.4	---	---	---
29	8.1	7.0	7.5	10.5	10.0	10.2	11.5	11.2	11.4	---	---	---
30	8.4	7.6	8.0	10.5	10.2	10.4	11.4	11.0	11.1	---	---	---
31	8.6	7.8	8.1	---	---	---	11.2	10.8	11.1	---	---	---
MONTH	11.8	6.4	7.7	13.8	7.2	8.7	11.6	9.0	10.6	12.2	10.8	11.6

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	14.8	14.0	14.4	10.7	10.4	10.5	9.4	8.9	9.1
2	---	---	---	14.6	12.7	13.3	10.9	10.4	10.7	9.5	9.0	9.2
3	---	---	---	13.2	12.6	12.9	10.9	10.7	10.8	9.4	8.9	9.2
4	---	---	---	---	---	---	10.8	10.6	10.7	9.4	8.8	9.2
5	---	---	---	---	---	---	10.8	10.4	10.6	9.5	9.2	9.4
6	---	---	---	---	---	---	10.6	10.1	10.4	9.5	8.8	9.1
7	---	---	---	---	---	---	10.4	9.9	10.2	9.2	8.6	8.9
8	---	---	---	---	---	---	10.2	9.9	10.1	9.1	8.6	8.8
9	---	---	---	---	---	---	10.4	9.9	10.2	9.2	8.4	8.8
10	---	---	---	---	---	---	10.2	9.8	10.0	9.0	8.2	8.5
11	---	---	---	---	---	---	10.0	9.2	9.6	8.7	7.9	8.3
12	---	---	---	---	---	---	9.5	9.2	9.4	8.7	8.0	8.4
13	---	---	---	---	---	---	9.5	9.1	9.3	8.8	8.3	8.6
14	---	---	---	---	---	---	9.8	9.2	9.6	9.0	8.5	8.8
15	---	---	---	---	---	---	10.0	9.5	9.8	8.7	8.4	8.6
16	---	---	---	---	---	---	10.3	9.7	10.0	8.7	8.1	8.4
17	---	---	---	---	---	---	10.3	9.8	10.1	8.2	7.6	8.0
18	---	---	---	---	---	---	10.0	9.6	9.8	7.9	7.0	7.6
19	---	---	---	---	---	---	10.0	9.6	9.8	7.4	6.4	7.1
20	---	---	---	---	---	---	9.8	9.4	9.6	7.0	6.1	6.7
21	---	---	---	10.8	9.9	10.4	9.5	9.2	9.4	7.5	6.0	6.7
22	---	---	---	10.4	9.2	9.8	9.6	9.2	9.3	7.5	6.2	6.9
23	14.8	13.8	14.3	10.0	9.0	9.5	9.6	9.0	9.2	7.5	6.2	6.9
24	15.0	14.1	14.5	9.4	8.7	9.1	9.4	8.7	9.0	7.2	6.1	6.7
25	14.9	14.1	14.5	9.2	8.6	9.0	9.3	8.6	9.0	7.1	6.0	6.6
26	14.8	14.0	14.5	9.4	8.9	9.2	9.4	8.8	9.1	7.0	5.8	6.4
27	15.2	14.0	14.4	9.4	8.8	9.1	9.6	9.2	9.4	7.0	5.9	6.6
28	14.8	14.0	14.4	9.1	8.8	9.0	9.7	9.2	9.4	7.0	6.1	6.6
29	---	---	---	9.2	8.8	9.0	9.6	9.2	9.4	7.0	6.2	6.6
30	---	---	---	9.3	9.0	9.2	9.4	9.0	9.2	7.2	6.1	6.7
31	---	---	---	10.6	10.4	10.5	---	---	---	7.3	6.2	6.7
MONTH	15.2	13.8	14.4	14.8	8.6	10.3	10.9	8.6	9.8	9.5	5.8	7.9

01482800 DELAWARE RIVER AT REEDY ISLAND JETTY, DE--Continued

DISSOLVED OXYGEN (DO), IN MILLIGRAMS PER LITER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.4	6.2	6.8	6.7	5.5	6.0	6.2	5.6	5.8	6.0	5.3	5.6
2	7.5	6.5	7.0	6.3	5.2	5.7	6.0	5.4	5.6	6.0	5.3	5.6
3	7.3	6.4	6.9	6.2	5.1	5.7	6.0	5.3	5.6	5.9	5.3	5.5
4	8.0	6.2	7.0	6.4	5.4	5.9	5.9	5.4	5.6	6.1	5.3	5.6
5	7.6	6.8	7.2	7.0	5.8	6.1	6.0	2.3	5.5	6.4	5.4	5.8
6	7.5	6.4	7.1	6.9	5.6	5.9	6.0	5.3	5.6	6.3	5.4	5.8
7	7.2	6.5	6.8	6.5	5.5	5.9	5.9	5.4	5.7	6.1	5.7	5.8
8	7.2	6.2	6.8	6.6	5.5	5.9	5.9	5.4	5.7	6.2	5.8	6.0
9	7.1	6.0	6.5	6.4	5.5	5.8	6.0	5.4	5.6	6.5	5.8	6.1
10	6.9	6.0	6.5	6.0	5.4	5.7	6.0	5.4	5.6	6.9	6.1	6.5
11	7.0	6.0	6.5	6.6	5.5	6.0	5.9	5.4	5.6	6.9	6.3	6.6
12	7.1	6.0	6.6	7.0	6.1	6.4	5.7	5.2	5.5	6.9	6.4	6.6
13	7.2	6.1	6.6	7.0	6.2	6.6	5.6	5.0	5.3	7.2	6.6	6.9
14	7.2	6.2	6.8	6.8	6.2	6.5	5.4	4.8	5.1	7.4	6.8	7.0
15	7.5	6.5	7.0	6.7	6.0	6.3	5.4	4.5	5.0	7.1	6.6	7.0
16	7.8	6.6	7.2	6.4	5.6	6.0	5.5	4.6	5.1	7.0	6.5	6.7
17	7.4	6.7	7.1	6.1	5.3	5.7	5.5	4.7	5.1	7.0	6.5	6.7
18	7.5	6.4	6.9	6.0	4.8	5.4	5.5	4.6	5.1	7.2	6.4	6.6
19	7.1	6.2	6.7	5.7	4.6	5.2	5.7	4.6	5.0	6.8	6.3	6.5
20	7.2	5.9	6.6	5.6	4.6	5.2	5.5	4.5	5.1	6.9	6.2	6.5
21	7.4	6.0	6.5	5.8	4.6	5.2	6.2	5.2	5.6	6.9	6.2	6.4
22	7.2	5.6	6.3	5.5	4.5	5.0	6.2	5.2	5.6	6.8	6.1	6.4
23	7.1	5.5	6.2	5.4	4.3	4.8	6.0	5.2	5.5	7.1	6.6	6.8
24	7.1	5.5	6.3	5.6	4.5	5.0	5.9	5.2	5.4	7.1	6.6	6.8
25	7.4	5.8	6.4	5.8	4.9	5.4	5.9	5.2	5.5	7.2	6.5	6.8
26	6.7	5.8	6.2	6.0	5.2	5.6	5.8	5.4	5.6	7.8	6.9	7.3
27	6.4	5.4	6.0	5.9	5.4	5.6	6.2	5.2	5.6	7.7	6.9	7.3
28	6.3	5.5	5.9	5.8	1.6	5.5	6.3	5.5	5.9	7.6	7.0	7.3
29	6.6	5.6	6.0	6.0	5.2	5.5	6.2	5.4	5.8	8.3	7.4	7.7
30	6.5	5.4	6.0	6.2	5.4	5.7	6.2	5.5	5.8	8.3	7.5	7.8
31	---	---	---	6.3	5.6	5.9	5.9	5.3	5.6	---	---	---
MONTH	8.0	5.4	6.6	7.0	1.6	5.7	6.3	2.3	5.5	8.3	5.3	6.5

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1978

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		EQUINUNK CREEK BASIN				
01427200	Equinunk Creek at Equinunk, Pa.	Lat 41°51'12", long 75°13'31", Wayne County, at bridge on State Highway 191, 1/4 mile upstream from mouth at Equinunk, Pa.	57.7	1978	7-11-78 7-18-78 7-20-78 8-15-78	16 14 9.7 22
		LACKAWAXEN CREEK BASIN				
*01427950	West Branch Lackawaxen Creek near Aldenville, Pa.	Lat 41°40'28", long 75°22'35", Wayne County, at bridge on State Highway 247, 0.3 mile downstream from Hohnsons Creek and 2 miles northwest of Aldenville. Datum of gage is 1,244.60 ft National Geodetic Vertical Datum of 1929.	40.6	1975-78	5-4-78	35
01428800	West Branch Lackawaxen River at Aldenville, Pa.	Lat 41°38'38", long 75°21'36", Wayne County, at bridge on State Highway 170, 0.3 mile southeast of Aldenville and 4 1/2 miles north of Prompton.	48.9	1970-78	5-4-78	46
*01429300	Dyberry Creek above reservoir near Honesdale, Pa.	Lat 41°39'26", long 75°17'12", Wayne County, on right bank, 955 ft downstream from bridge on West Branch Dyberry Creek at Tanners Falls, 0.2 mile downstream from confluence of east and west branches of Dyberry Creek, and 6 miles north of Dyberry. Datum of gage is 1,023.43 ft National Geodetic Vertical Datum of 1929.	45.8	1975-78	5-4-78	42
		TOMS CREEK BASIN				
01439400	Toms Creek at Egypt Mills near Bushkill, Pa.	Lat 41°07'29", long 74°57'14", Pike County, at bridge on U.S. Highway 209 at Egypt, 0.3 mile upstream from mouth and 3 miles northwest of Bushkill.	3.34	1970-71	4-25-78 9-28-78	11 .67
		SHAWNEE CREEK BASIN				
01440250	Shawnee Creek at Shawnee on Delaware, Pa.	Lat 41°00'42", long 75°06'40", Monroe County, at bridge on State Highway 945, in village of Shawnee on Delaware, 0.6 mile upstream from mouth and 3 miles east of East Stroudsburg.	4.58	1970-78	4-25-78 9-28-78	11 .78
		BRODHEAD CREEK BASIN				
01440500	Paradise Creek at Henryville, Pa.	Lat 41°06'00", long 75°15'05", Monroe County, at bridge on State Highway 191, 200 ft upstream from Cranberry Creek, and 0.5 mile northwest of Henryville.	30.2	1970-78	5-2-78	63

* Also a crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		JACOBY CREEK BASIN				
01443100	Jacoby Creek at Portland, Pa.	Lat 40°55'00", long 75°06'19", Northampton County, at county highway bridge, 0.6 mile southwest of Portland and 0.7 mile upstream from mouth.	6.17	1970-78	4-25-78 9-28-78	12 5.0
		MARTINS CREEK BASIN				
01446650	Martins Creek Below Little Martins Creek at Martins Creek Pa.	Lat 40°47'02", long 75°11'08", Northampton County, at bridge on U.S. Highway 611 in village of Martins Creek and 0.9 mile upstream from mouth.	43.4	1932 1970-78	4-25-78 9-28-78	55 23
		BUSHKILL CREEK BASIN				
01446900	Bushkill Creek near Easton, Pa.	Lat 40°42'38", long 75°14'46", Northampton County, at bridge just west of Bushkill Drive at Coilton, 0.8 mile downstream from Schoeneck Creek and 2 miles north of Easton.	72.0	1970-78	5-2-78	91
		LEHIGH RIVER BASIN				
01448100	Sandy Run near White Haven, Pa.	Lat 41°00'31", long 75°46'08", Luzerne County, at bridge on L.R. 40118, 800 ft upstream from Pond Creek and 3.8 miles south of White Haven.	10.9	1970-78	5-1-78	14
01449355	Middle Creek at Kresgeville, Pa.	Lat 40°54'03", long 75°29'50", Monroe County, at bridge on U.S. Highway 209, at Kresgeville, 0.5 mile downstream from Dotters Creek and 0.5 mile upstream from mouth.	18.6	1970-78	8-22-78	17
*01450455	Buckwha Creek at Little Gap, Pa.	Lat 40°49'21", long 75°32'04", Carbon County, at bridge on L.R. 13035, 0.35 mile upstream from mouth and 0.75 mile south of Little Gap.	42.5	1975-78	5-4-78	39
01451110	Hockendauqua Creek near Northampton, Pa.	Lat 40°42'50", long 75°29'45", Northampton County, at bridge on county road, 1.7 miles north of Northampton and 3.3 miles upstream from mouth.	38.1	1970-78	5-2-78	33
01451165	Catasauqua Creek at Catasauqua, Pa.	Lat 40°38'52", long 75°28'06", Lehigh County, at bridge on North Dauphin Street, Catasauqua, 0.1 mile upstream from mouth	15.7	1970-78	5-1-78	12
*01452300	East Branch Monocacy Creek near Bath, Pa.	Lat 40°43'10", long 75°22'10", Northampton County, on left bank 25 ft downstream from bridge on L.R. 40863, 1.5 miles southeast of Bath, and 2.5 miles upstream from mouth. Datum of gage is 372.06 ft National Geodetic Vertical Datum of 1929.	5.35	1962-68‡ 1969-77	3-21-78 7-21-78 8-17-78 8-30-78	24 0 10 2.3
		COOKS CREEK BASIN				
01457790	Cooks Creek at Durham Furnace, Pa.	Lat 40°34'56",long 75°12'20", Bucks County, on east side of Red Brick Road, 0.1 mile north of State Highway 212, 0.5 mile upstream from mouth and Durham Furnace.	29.4	1934 1944 1949-50 1970-78	9-8-78	16
		TINICUM CREEK BASIN				
*01458900	Tinicum Creek near Ottsville, Pa.	Lat 40°28'14", long 75°08'13", Bucks County, at concrete bridge on gravel road, 0.9 mile below confluence of Rapp Creek and Beaver Creek, 1.5 miles east of Ottsville and 5.3 miles above mouth.	14.7	1971-78	10-11-78 4-25-78 8-28-78 9-8-78 9-28-78	11 11 4.7 2.4 2.3
		TOHICKON CREEK BASIN				
01459150	Tohickon Creek near Quakertown,	Lat 40°26'26", long 76°18'42", Bucks County, 1,000 ft downstream from highway bridge and mouth of Morgan Creek and 1 mile east of Quakertown.	27.5	1970-78	9-8-78	6.6

* Also a crest-stage partial-record station.

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements Date	 Discharge (cfs)
		JERICHO CREEK BASIN				
01462300	Jericho Creek at Washington Crossing, Pa.	Lat 40°18'40", long 74°54'23", Bucks County, at bridge on State Highway 32, 0.3 mile upstream from mouth and 2.5 miles northwest of Washington Crossing.	9.52	1971-78	4-25-78 9-8-78 9-28-78	6.3 2.2 1.9
		SCHUYLKILL RIVER BASIN				
01470758	Moselem Creek Near Shoemakersville, Pa.	Lat 40°30'10", long 75°52'47", Berks County, at bridge on county road, 0.4 mile upstream from mouth, 2.8 miles west of Moselem Springs and 5 miles east of Shoemakersville.	13.5	1970-78	5-1-78	22
*01471800	Pine Creek near Manatawny, Pa.	Lat 40°24'43", long 75°44'02", Berks County, at steel bridge on macadam road, Lobachsville, 0.5 mile upstream from mouth, 0.5 mile below West Branch Pine Creek and 2 miles north of Manatawny.	15.6	1970-78	10-12-77 7-24-78 9-7-78	3.5 3.8 2.2
*01473470	Stony Creek at Norristown, Pa.	Lat 40°07'38", long 75°20'43", Montgomery County, on right bank at culvert on Sterger Street in Norristown, 0.1 mile downstream from dam, 0.7 mile downstream from unnamed tributary, and 1.1 miles upstream from mouth.	20.4	1975-78	10-12-77 7-26-78	4.8 4.2
		DARBY CREEK BASIN				
*01475555	Hermesprota Creek at Darby, Pa.	Lat 39°54'02", long 75°16'19", Delaware County, on right bank at pipe arch culvert on Linden Ave. in Darby, and 1.7 miles upstream from mouth.	1.01	1975-78	10-18-77 7-28-78	.37 1.4
*01475560	Stony Creek at Prospect Park, Pa.	Lat 39°53'14", long 75°19'00", Delaware County, on left bank at concrete arch culvert and dam on 13th Street in Prospect Park.	2.29	1975-78	10-21-77 7-28-78	.73 3.0
*01475600	Muckinipattis Creek at Glenolden, Pa	Lat 39°53'44", long 75°17'20", Delaware County, on left bank at Glenolden Ave, in Glenolden, 1.5 miles upstream from mouth.	3.50	1975-78	10-18-77 8-15-78	.95 .49
		CRUM CREEK BASIN				
*01475850	Crum Creek near Newtown Square, Pa.	Lat 39°58'35", long 75°26'13", Delaware County, at Castle Rock Bridge on State Highway 3, 0.6 mile upstream from Preston Run, 0.8 mile upstream from Geist Reservoir and 2 miles west of Newtown Square.	15.8	1932 1949 1970-78	11-28-77 7-28-78 9-07-78	27 48 12
*01476000	Crum Creek at Woodlyn, Pa.	Lat 39°52'44", long 75°20'58", Delaware County, on right bank at bridge on Bullens Lane.	33.3	1931-37ƒ 1975-78	10-21-77	2.2
		RIDLEY CREEK BASIN				
*01476435	Ridley Creek at Dutton Mill, near West Chester, Pa.	Lat 39°58'52", long 75°31'02", Chester County, on left bank at single span highway bridge on Strasburg Road, 0.1 mile west of Dutton Mill and 4.9 miles east of West Chester.	9.70	1975-78	11-28-77	16
*01476500	Ridley Creek at Moylan, Pa.	Lat 39°54'08", long 75°23'32", Delaware County, on upstream left bank of Manchester Road bridge at intersection with Knowltown Road, at Moylan, and 1 mile south of Media.	31.9	1931-37ƒ 1975-78	10-26-77 7-27-78	18 25
		CHESTER CREEK BASIN				
*01476836	East Branch Chester Creek near West Chester, Pa.	Lat 39°56'09", long 75°32'29", Chester County, at two-span highway bridge on Street Road, 0.4 mile upstream from Goose Run, 1.1 miles northwest of Cheyney and 3.8 miles southeast of the intersection of State Route 100 and U.S. Highway 202.	10.8	1975-78	10-26-77 7-26-78	5.0 8.0

* Also a crest-stage partial-record station

ƒ Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		CHESTER CREEK BASIN				
*01476853	East Branch Chester Creek at Cheney, Pa.	Lat 39°55'58", long 75°31'03", Delaware County, at bridge on Station Road, 0.5 mile northeast of Cheyney and 1.5 miles downstream from Goose Run.	22.8	1975-78	10-26-77 7-27-78	16 24
*01476950	West Branch Chester Creek near Chester Heights, Pa.	Lat 39°52'36", long 75°27'05", Delaware County, at single span bridge on Birney Road (SR 23017) at Aston Mills, Aston Township, 1.2 miles upstream from confluence with East Branch and 1.8 miles southeast of Chester Heights.	18.0	1975-78	10-21-77 7-27-78	10 18
		CHRISTINA CREEK BASIN				
01478150	East Branch White Clay Creek at Landenberg, Pa.	Lat 30°46'40", long 75°46'18", Chester County, at county highway bridge at Landenberg, 1.4 miles downstream from Egypt River and 4 miles southeast of West Grove.	25.6	1970-78	9-07-78	16
		BRANDYWINE CREEK BASIN				
01479700	West Branch Red Clay Creek near Kennett Square, Pa.	Lat 39°48'39", long 75°42'19", Chester County, at county highway bridge on Kaolin Road, 1 mile upstream from East Branch Red Clay Creek, 1.4 miles east of Kaolin and 2.5 miles south of Kennett Square.	17.0	1970-78	9-07-78	17

* Also a crest-stage partial-record station.
≠ Operated as a continuous-record gagin station.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		CALKINS CREEK BASIN					
01427650	N.B.Calkins Creek near Damascus Pa.	Lat 41°42'00", long 75°10'00". at concrete bridge on State Highway 371 at West Damascus, 4.0 miles west of Damascus, 4.8 miles above Sunny Brook, and 8.0 miles above mouth.	7.02	1962-64 1965-73≠ 1974-78	3-28-78	8.83	1,260
		LACKAWAXEN RIVER BASIN					
*01427950	W.B. Lackawaxen River near Aldenville, Pa.	Lat 41°40'28", long 75°22'35", Wayne County, at bridge on State Highway 247, 0.3 mile downstream from Johnsons Creek and 2.0 miles northwest of Aldenville. Datum of gage is 1,244.60 ft National Geodetic Vertical Datum of 1929.	40.6	1975-78	1-9-78	5.10	1,170
*01429300	Dyberry Creek above Reservoir near Honesdale, Pa.	Lat 41°39'26", long 75°17'12", Wayne County, on right bank, 955 ft downstream from bridge on West Branch Dyberry Creek at Tanners Falls, 0.2 mile downstream from confluence of the east and west branches of Dyberry Creek, and 6 miles north of Dyberry. Datum of gage is 1,023.43 ft National Geodetic Vertical Datum of 1929.	45.8	1975-78	1-9-78	9.10	1,340
01430000	Lackawaxen River near Honesdale, Pa.	Lat 41°35'43", long 75°14'54", at Lemnitzer Bridge in Honesdale, Wayne County, on U.S. Highway 6, and 1.2 miles downstream from Dyberry Creek.	164	1949-69≠ 1974-78	3-28-78	5.02	3,070
01431000	Middle Creek near Hawley, Pa.	Lat 41°29'05", long 75°13'20" Wayne County, at bridge on L.R. 63022, 0.1 mile below Red Shale Brook, 2 miles northwest of Hawley, and 2.5 miles above mouth.	78.4	1945-60≠ 1961-78	3-28-78	5.98	2,260
01431680	Mill Brook near Paupack, Pa.	Lat 41°23'15", long 75°14'20", Pike County, at culvert on State Highway 507, 400 ft above mouth, 1.8 miles south of Paupack. Datum of gage is 1,183.84 ft National Geodetic Vertical Datum of 1929.	4.84	1960-78	1-9-78	6.10	335
		VANDERMARK CREEK BASIN					
01438300	Vandermark Creek at Milford, Pa	Lat 41°19'35", long 74°47'50", Pike County, at stone bridge on Broad Street in Milford, and 0.4 mile above mouth. Datum of gage is 490.50 ft National Geodetic Vertical Datum of 1929.	5.36	1962-78	1-9-78	3.18	205

≠ Operated as a continuous-record station.
* Also low-flow Partial-record station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		BRODHEAD CREEK BASIN					
01440300	Mill Creek at Mountainhome, Pa.	Lat 41°09'50", long 75°16'00", Monroe County, at stone-arch bridge on macadam road 0.5 mile east of Mountainhome, and 1.5 miles above mouth.	5.84	1961-78	1-9-78	11.03	1,130
01440900	McMichael Creek near Stroudsburg, Pa.	Lat 40°58'04", long 75°13'08", Monroe County, at bridge on Dreher Ave. two miles southwest of Stroudsburg, 3.2 miles upstream from mouth of Brodhead Creek.	63.9	1975-78	1-9-78	Unknown	Unknown
		LEHIGH RIVER BASIN					
*01450455	Buckwha Creek at Little Gap, Pa	Lat 40°49'21", long 75°32'04", Carbon County, at bridge on L.R. 13035, 0.35 mile upstream from mouth and 0.75 mile south of Little Gap.	42.5	1975-78	1-9-78	7.89	2,340
*01452300	East Branch Monocacy Creek near Bath, Pa.	Lat 40°43'10", long 75°22'10", Northampton County, on left bank 25 ft downstream from bridge on L.R. 40863, 1.5 miles southeast of Bath, and 2.5 miles upstream from mouth. Datum of gage is 372.06 ft National Geodetic Vertical Datum of 1929.	5.35	1962-68≠ 1969-78	1-26-78	5.72	478
01454600	Polk Valley Run at Hellertown, Pa.	Lat 40°34'05", long 75°19'45", Northampton County, at concrete bridge on L.R. 48093, 0.7 mile above mouth, and 1.5 miles southeast of Hellertown.	2.14	1963-78	1-26-78	3.28	64
		TINICUM CREEK BASIN					
*01458900	Tinicum Creek near Ottsville,	Lat 40°28'14", long 75°08'13", Bucks County, at concrete bridge on gravel road, 0.9 mile below confluence of Rapp Creek, 1.5 miles east of Ottsville, and 5.3 miles above mouth.	14.7	1962-78	8-12-78	5.39	1,690
		POQUESSING CREEK BASIN					
01465780	Poquessing Creek above Byberry Creek at Philadelphia, Pa.	Lat 40°14'10", long 74°58'33", Philadelphia County, on left bank 2,200 ft upstream from Byberry Creek, Philadelphia. Datum of gage is 17.26 ft above mean sea level.	13.2	1965-70≠ 1971-78	8-7-78	8.45	2,210
01465795	Byberry Creek at Grant Avenue Philadelphia, Pa.	Lat 40°03'45", long 74°59'47" Philadelphia County, on left bank 120 ft upstream from Grant Avenue Bridge, 1,300 ft west of Frankford Avenue, Philadelphia. Datum of gage is 26.17 ft above mean sea level.	7.13	1964-70≠ 1971-78	8-11-78	.68	≠
		PENNYPACK CREEK BASIN					
01467045	Pennypack Creek below Verree Road, Philadelphia, Pa.	Lat 40°05'04", long 75°03'34" Philadelphia County, on left bank 600 ft downstream from Verree Road and 1 mile downstream from Rockledge Branch, Philadelphia. Datum of gage is 67.26 ft above mean sea level.	42.8	1964-70≠ 1971-78	1-26-78	11.45	3,710

≠ Operated as a continuous-record station.
* Also low-flow partial-record station.
≠ Not determined.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		SCHUYLKILL RIVER BASIN					
01467500	Schuylkill River at Pottsville, Pa.	Lat 40°40'53", long 76°11'25", Schuylkill County, at bridge on State Highway 61 at Pottsville, and 1.7 miles downstream from Mill Creek	53.4	1975-78	1-26-78	8.11	2,440
01467948	West Branch Schuylkill River near Cressona, Pa.	Lat 40°38'30", long 76°11'43" Schuylkill County, at bridge on Gordon-Nagle Trail, 0.75 miles upstream from Panther Creek, and 1.0 mile north of Cressona.	52.5	1975-78	1-26-78	5.53	1,520
01470190	Little Schuylkill River at Port Clinton, Pa.	Lat 40°35'24", long 76°01'43" Schuylkill County, 0.65 mile upstream from Rattling Run and 0.7 mile north of Port Clinton.	132	1975-78	1-26-78	8.05	7,300
01470748	Sacony Creek near Virginville, Pa.	Lat 40°31'27", long 75°51'29" Berks County, at bridge on L.R. 06135, 1.0 mile upstream from mouth, and 1.0 mile east of Virginville.	54.1	1975-78	1-26-78	9.55	2,940
01470810	Northkill Creek at Bernville, Pa.	Lat 40°26'22", long 76°07'12" Berks County, at bridge on State Highway 183, 0.3 mile upstream from Little Northkill Creek and 0.7 mile northwest of Bernville.	8.8	1975-78	1-26-78	6.60	1,340
01470818	Little Northkill Creek near Bernville, Pa.	Lat 40°26'33", long 76°07'23", Berks County, at bridge on L.R. 06013, 1.5 miles west of Bernville and 1.6 miles upstream from mouth.	21.2	1975-78	1-26-78	6.61	1,330
*01471800	Pine Creek near Manatawny, Pa.	Lat 40°24'43", long 75°44'02", Berks County, at steel bridge on macadam road, 0.5 mile above mouth, 0.5 mile below West Branch Pine Creek, and 2 miles north of Manatawny.	15.6	1961-78	1-26-78	5.66	404
01472162	Schuylkill River at Phoenixville, Pa.	Lat 40°08'11", long 75°30'41", Chester County, on the downstream end of the left bank wingwall of Reading Railroad bridge across the mouth of French Creek at Phoenixville.	1,280	1971-78	1-26-78	89.16	35,300
01473100	Zacharias Creek near Skippack, Pa.	Lat 40°12'26", long 75°21'57" Montgomery County, at concrete weir 1.2 miles above mouth, and 2.2 miles southeast of Skippack.	7.27	1960-78	1-26-78	8.90	3,400

* Also low-flow partial-record station.

01470766	Schuylkill River at Temple, Pa.	Lat 40°24'52", long 75°56'23", Berks County, at concrete bridge on State Highway Route 383, 0.7 mi downstream from mouth of Maiden Creek, 0.6 mi west of Temple.	641	1978	1-26-78	17.94	≠

≠ Not determined.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
01473193	Schuylkill River at Port Kennedy, Pa.	Lat 40°06'29", long 75°25'16" Montgomery County, on left bank 200 ft upstream from Betzwood Bridge, and 4.0 mile downstream from Perkiomen Creek at Port Kennedy.	1,691	1977-78	1-26-78	73.22	53,100
*01473470	Stony Creek at Norristown, Pa.	Lat 40°07'38", long 75°20'43" Montgomery County, on right bank at culvert on Sterger Street in Norristown, 0.1 mile downstream from dam, 0.7 mile downstream from unnamed tributary, and 1.1 miles upstream from mouth.	20.4	1975-78	1-26-78	8.74	≠
01473880	Pine Creek tributary at Fort Washington, Pa.	Lat 40°08'13", long 75°11'21", Montgomery County, at corrugated half-round culvert on Delaware Road in Fort Washington Industrial Park at Fort Washington, and 300 ft above mouth.	2.01	1962-78	1-26-78	7.57	314
01473900	Wissahickon Creek at Fort Washington, Pa.	Lat 40°07'26", long 75°13'13", Montgomery County, on concrete bridge on State Highway 73, 0.5 mile downstream from Sandy Run, and 1 mile south of Fort Washington.	40.8	1961-68‡ 1969-78	1-26-78	≠	4,200
01473980	Wissahickon Creek at Livezey Lane Philadelphia, Pa.	Lat 40°02'59", long 75°12'52", Philadelphia County, on left bank 300 ft upstream from Green Valley Boat Club, 500 ft downstream from Creshiem Creek in Philadelphia. Datum of gage is 78.55 ft above mean sea level.	59.2	1965-70‡ 1971-78	1-26-78	≠	4,250
		DARBY CREEK BASIN					
*01475555	Hermesprota Creek at Darby, Pa.	Lat 39°54'02", long 75°16'19", Delaware County, on right bank at culvert on Linden Avenue in Darby, 1.7 miles upstream from mouth.	1.01	1975-78	1-26-78	5.63	≠
*01475560	Stony Creek at Prospect Park, Pa.	Lat 39°53'14", long 75°19'00", Delaware County, on left bank at culvert and dam on 13th Street in Prospect Park.	2.29	1975-78	11-7-77	12.77	≠
*01475600	Muckinipattis Creek at Glenolden, Pa.	Lat 39°53'44", long 75°17'20", Delaware County, on left bank at Glenolden Avenue in Glenolden, 1.5 miles upstream from mouth.	3.50	1975-78	1-26-78	5.91	≠
		CRUM CREEK BASIN					
*01475850	Crum Creek near Newtown Square, Pa.	Lat 39°58'35", long 75°26'13" Delaware County, at Castle Rock Bridge on State Highway 3, 0.6 mile upstream from Preston Run, 0.8 mile upstream from Geist Reservoir, and 2 miles west of Newtown Square.	15.8	1977-78	1-26-78	6.03	≠
*01476000	Crum Creek at Woodlyn, Pa.	Lat 39°52'44", long 75°20'58", Delaware County, on right bank at bridge on Bullens Lane in Woodlyn.	33.3	1931-37‡ 1975-78	11-7-78	6.43	1,300

≠ Not determined.
‡ Operated as a continuous-record station
* Also low-flow partial-record station.

Annual maximum discharge at crest-stage partial-record stations--continued

Station No.	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft³/s)
		RIDLEY CREEK BASIN					
*01476435	Ridley Creek at Dutton Mill near West Chester, Pa.	Lat 39°58'52", long 75°31'02", Chester County, on left bank at Strasburg Road, 0.1 mile west of Dutton Mill and 4.9 miles east of West Chester.	9.70	1975-78	1-26-78	6.37	855
*01476500	Ridley Creek Moylan, Pa.	Lat 39°54'08", long 75°23'32", Delaware County, on upstream left bank of Manchester Road bridge intersection with Knowltown Road, at Moylan, and 1.0 mile south of Media.	31.9	1978	1-26-78	7.26	≠
		CHESTER CREEK BASIN					
*01476836	East Branch Chester Creek near West Chester, Pa.	Lat 39°56'09", long 75°32'29" Chester County, at bridge on Street Road, 0.4 mile upstream from Goose Run, 1.1 miles northwest of Cheyney, and 3.8 miles east of the intersection of Pa. Route 100 and U.S. Highway 202 in West Chester.	10.8	1975-78	1-26-78	7.54	971
*01476853	East Branch Chester Creek at Cheyney, Pa.	Lat 39°55'58", long 75°31'03", Delaware County, at bridge on Station Road, 0.5 mile northeast of Cheyney and 1.5 miles downstream from Goose Run.	22.8	1975-78	1-26-78	11.41	1,650
*01476950	West Branch Chester Creek near Chester Heights, Pa.	Lat 39°52'36", long 75°27'05", Delaware County, at bridge on Birney Road at Aston Mills, 1.2 miles upstream from confluence with East Branch, and 1.8 miles southeast of Chester Heights.	18.0	1975-78	1-26-78	8.39	3,440
		CHRISTINA CREEK BASIN					
01478200	Middle Branch White Clay Creek near Landenberg, Pa.	Lat 39°46'54", long 75°48'03", Chester County, at bridge on L.R. 15017, 1.4 miles above mouth, and 1.7 miles west of Landenberg.	12.7	1960-78	1-26-78	10.22	2,410
		BRANDYWINE CREEK BASIN					
01480610	Sucker Run Near Coatesville, Pa.	Lat 39°58'20", long 75°51'03", Chester County, at concrete bridge on South Park Avenue at State Highway 372, 1.6 miles above mouth, and 2 miles west of Coatesville.	2.57	1964-78	6-27-78	6.50	≠

≠ Not determined.
* Also a low-flow partial-record station.

Discharge measurements made at miscellaneous sites during water year 1978

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		SHOHOLA CREEK BASIN				
Shohola Creek	Delaware River	Lat 41°27'20", long 74°55'25" Pike County, 1.4 miles above mouth and 1.4 miles south of Shohola.	83.6	1920-28≠ 1957 1959-67 1969-77	5-31-78 5-31-78 6-20-78	191 191 83
		LEHIGH RIVER BASIN				
Lehigh River	Delaware River	Lat 40°49'45", long 75°42'20", Carbon County, at highway bridge at Lehighton, 0.3 mi upstream from Mahoning Creek.	591	1945-48≠ 1976	11-17-77 8-3-78	2,080 286
Lehigh River	Delaware River	Lat 40°39'27", long 75°29'02", Northampton County, 1,000 ft downstream from Lehigh St. bridge at North Catasauqua, 1.4 mi downstream from Hokendaqua Creek.	-	-	10-4-77	1,230
Lehigh River	Delaware River	Lat 40°36'23", long 75°27'17", Lehigh County, on upstream side of Hamilton Street bridge, at Allentown, 200 ft downstream from lock and dam, and 0.7 mile upstream from Little Lehigh Creek.	1,033	1977	10-5-77 8-31-78	1,330 900
		SCHUYLKILL RIVER BASIN				
Tulpehocken Creek Tributary	Tulpehocken Creek	Lat 40°25'36", long 76°10'01", Berks County, 0.65 mile upstream from mouth and 2.3 mile northwest of Host.	-	1970-77	4-11-78 6-5-78 8-15-78 9-27-78	1.2 1.0 1.2 3.5
Pigeon Creek	Schuylkill River	Lat 40°12'03", long 75°32'10", Chester County, at bridge on Ellis Woods Road, 1.8 miles west of Parker Ford and 3.0 miles upstream from mouth.	12.0	1970-76	10-6-77 8-14-78	3.5 13
Stony Creek	Schuylkill River	Lat 40°10'01", long 75°32'57", Chester County, on downstream side of Pikeland Avenue bridge, 0.3 mile south of Spring City, and about 2.2 miles upstream from mouth.	4.07	1971-73 1975-76	10-6-77 8-14-78	.47 4.6
Pigeon Run	Pickering Creek	Lat 40°05'37", long 75°34'54", Chester County, at concrete bridge on Pikeland Road (map shows Church Road) 0.7 mi south of Merlin and 3.5 miles west of Phoenixville.	28.5	1967-68 1975	10-6-77	1.3
Pickering Creek	Schuylkill River	Lat 40°06'33", long 75°31'42", Chester County, on right bank 15 feet downstream from steel and timber bridge on Creek Road at State Highway 29, 0.3 mile downstream from Pennsylvania Railroad Bridge, 1 mile south of Phoenixville, and 2.6 miles upstream from Pickering Creek Reservoir.	31.4	1967-68 1975	9-19-78	50
Valley Creek	Schuylkill River	Lat 40°04'53", long 75°27'25", Chester County, at bridge on Wilson Road, 1 mile south of Valley Forge, 1.3 miles upstream from mouth, and 5 miles west of Norristown.	22.0	1972-73 1975 1977	10-12-77	17

Discharge measurements made at miscellaneous sites during water year 1978--continued

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		CHESTER CREEK BASIN				
Chester Creek	Delaware River	Lat 39°53'38", long 75°26'00", Delaware County, at bridge on route 452 at Glen Riddle, 0.8 mi downstream from West Branch Chester Creek.	-	-	7-27-78 9-12-78	53 56
		CHRISTINA RIVER BASIN				
East Branch White Clay Creek Tributary	East Branch White Clay Creek	Lat 39°51'30", long 75°47'01", Chester County, at box culvert on unmarked macadam road, 0.9 mi southwest of London Grove, and 2.2 mi northwest of Toughkenamon.	2.79	-	6-6-78	3.2
		ELK RIVER BASIN				
Big Elk Creek	Elk River	Lat 39°44'08", long 75°52'53", Chester County, at Fergusons Bridge (No. 35) on State Highway 841, 0.9 mile north of Lewisville.	31.2	1976-77	10-5-77 1-26-78 8-15-78	14 4,410 28
Little Elk Creek	Elk River	Lat 39°43'13", long 75°53'50", Cecil County, Maryland at single span highway bridge on Lewisville, Pa. Blake, Md. road, 1.2 miles west of Lewisville, Pa. and 2.2 miles norwest of Providence, Md.	13.4	1976-77	10-5-77 8-15-78	4.6 8.1

* Base flow.

≠ Operated as a continuous-record gaging station.

Water-quality partial-record stations are particular sites where chemical-quality, biological and or sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
DELAWARE RIVER BASIN											
01467100 - DELAWARE R AT LEHIGH AVE, PHILA., PA. (LAT 39 58 09 LONG 075 06 41)											
OCT , 1977 06...	1345	129	--	17.5	--	43	25	12	3.2	6.5	1.6
NOV 03...	1220	143	--	--	--	47	20	13	3.6	7.7	1.7
DEC 01...	1500	164	--	8.0	--	57	30	15	4.7	8.2	2.2
01467300 - DELAWARE R AT WHARTON ST, PHILA., PA. (LAT 39 55 54 LONG 075 08 11)											
OCT , 1977 06...	1255	130	--	17.5	--	42	25	12	3.0	7.1	1.8
NOV 03...	1100	155	--	14.0	--	44	17	12	3.5	8.8	1.8
DEC 01...	1400	166	--	8.0	--	57	30	15	4.8	9.2	2.2
01467400 - DELAWARE R AT LEAGUE ISLAND, PHILA., PA. (LAT 39 52 56 LONG 075 10 43)											
OCT , 1977 06...	1215	159	--	18.0	--	50	35	14	3.7	8.8	2.1
NOV 03...	1000	170	--	14.0	--	51	27	14	4.0	10	2.0
DEC 01...	1330	179	--	8.0	--	60	26	16	4.8	10	2.3
SCHUYLKILL RIVER BASIN											
01472054 - PIGEON CREEK NEAR BUCKTOWN, PA. (LAT 40 11 50 LONG 075 40 10)											
OCT , 1977 20...	1600	125	6.8	13.0	10.2	45	22	12	3.7	5.6	1.6
01472065 - PIGEON CREEK NEAR PORTERS MILL, PA. (LAT 40 11 27 LONG 075 38 10)											
OCT , 1977 20...	1500	145	7.1	14.5	10.0	52	22	14	4.2	6.1	1.8
01472080 - PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03 LONG 075 37 10)											
OCT , 1977 20...	1400	160	7.3	14.0	10.2	57	25	15	4.8	6.8	2.4
01472109 - STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11 LONG 075 34 45)											
OCT , 1977 20...	1130	255	7.4	14.0	10.1	87	42	22	7.9	13	4.6
01472110 - STONY RUN AT SPRING CITY, PA. (LAT 40 10 01 LONG 075 32 57)											
OCT , 1977 20...	1030	295	7.2	13.0	9.8	92	43	23	8.5	16	10
01472126 - FRENCH CREEK NEAR TRYTHALL, PA. (LAT 40 12 00 LONG 075 45 53)											
OCT , 1977 21...	1300	70	6.9	13.5	10.1	25	6	6.0	2.0	3.4	1.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DELAWARE RIVER BASIN --Continued

01467100 - DELAWARE R AT LEHIGH AVE, PHILA., PA. (LAT 39 58 09 LONG 075 06 41)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
06...	22	--	18	--	20	8.0	.1	3.6	84	69	--
NOV											
03...	33	--	27	--	22	10	.0	3.8	80	82	--
DEC											
01...	33	--	27	--	26	11	.1	5.5	99	94	--

01467300 - DELAWARE R AT WHARTON ST, PHILA., PA. (LAT 39 55 54 LONG 075 08 11)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
06...	21	--	17	--	22	8.4	.1	3.5	81	72	--
NOV											
03...	33	--	27	--	25	11	.1	4.2	93	87	--
DEC											
01...	33	--	27	--	27	13	.1	5.5	103	98	--

01467400 - DELAWARE R AT LEAGUE ISLAND, PHILA., PA. (LAT 39 52 56 LONG 075 10 43)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
06...	18	--	15	--	33	11	.1	3.6	97	89	--
NOV											
03...	30	--	25	--	34	13	.1	4.5	101	100	--
DEC											
01...	41	--	34	--	32	13	.1	5.6	107	109	--

SCHUYLKILL RIVER BASIN --Continued

01472054 - PIGEON CREEK NEAR BUCKTOWN, PA. (LAT 40 11 50 LONG 075 40 10)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
20...	28	0	23	7.1	19	5.2	.0	14	89	75	.80

01472065 - PIGEON CREEK NEAR PORTERS MILL, PA. (LAT 40 11 27 LONG 075 38 10)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
20...	37	0	30	4.7	19	6.2	.0	17	97	87	1.2

01472080 - PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03 LONG 075 37 10)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
20...	39	0	32	3.1	22	7.3	.0	17	102	95	1.5

01472109 - STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11 LONG 075 34 45)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
20...	56	0	46	3.6	30	18	.1	18	168	141	4.3

01472110 - STONY RUN AT SPRING CITY, PA. (LAT 40 10 01 LONG 075 32 57)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
20...	60	0	49	6.1	34	22	.1	16	180	159	1.1

01472126 - FRENCH CREEK NEAR TRYTHALL, PA. (LAT 40 12 00 LONG 075 45 53)

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
OCT , 1977											
21...	23	0	19	4.6	7.6	1.8	.0	9.1	51	43	.19

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
DELAWARE RIVER BASIN --Continued											
01467100 - DELAWARE R AT LEHIGH AVE, PHILA., PA. (LAT 39 58 09 LONG 075 06 41)											
OCT , 1977 06...	.66	--	.03	--	.69	--	--	--	--	--	--
NOV 03...	.70	--	.03	--	.73	--	--	--	--	--	--
DEC 01...	1.1	--	.03	--	1.1	--	--	--	--	--	--
01467300 - DELAWARE R AT WHARTON ST, PHILA., PA. (LAT 39 55 54 LONG 075 08 11)											
OCT , 1977 06...	.62	--	.03	--	.65	--	--	--	--	--	--
NOV 03...	.02	--	.02	--	.04	--	--	--	--	--	--
DEC 01...	.97	--	.03	--	1.0	--	--	--	--	--	--
01467400 - DELAWARE R AT LEAGUE ISLAND, PHILA., PA. (LAT 39 52 56 LONG 075 10 43)											
OCT , 1977 06...	.69	--	.03	--	.72	--	--	--	--	--	--
NOV 03...	.74	--	.03	--	.77	--	--	--	--	--	--
DEC 01...	1.1	--	.03	--	1.1	--	--	--	--	--	--
SCHUYLKILL RIVER BASIN --Continued											
01472054 - PIGEON CREEK NEAR BUCKTOWN, PA. (LAT 40 11 50 LONG 075 40 10)											
OCT , 1977 20...	--	.00	--	.80	--	.03	.39	.42	1.2	.02	.00
01472065 - PIGEON CREEK NEAR PORTERS MILL, PA. (LAT 40 11 27 LONG 075 38 10)											
OCT , 1977 20...	--	.00	--	1.2	--	.02	.38	.40	1.6	.04	.02
01472080 - PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03 LONG 075 37 10)											
OCT , 1977 20...	--	.01	--	1.5	--	.01	.52	.53	2.0	.05	.05
01472109 - STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11 LONG 075 34 45)											
OCT , 1977 20...	--	.05	--	4.3	--	.09	.57	.66	5.0	.42	.38
01472110 - STONY RUN AT SPRING CITY, PA. (LAT 40 10 01 LONG 075 32 57)											
OCT , 1977 20...	--	.01	--	1.1	--	.08	.57	.65	1.8	.19	.09
01472126 - FRENCH CREEK NEAR TRYTHALL, PA. (LAT 40 12 00 LONG 075 45 53)											
OCT , 1977 21...	--	.00	--	.19	--	.04	.53	.57	.76	.02	.00

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
DELAWARE RIVER BASIN --Continued											
01467100 - DELAWARE R AT LEHIGH AVE, PHILA., PA. (LAT 39 58 09 LONG 075 06 41)											
OCT , 1977 06...	.06	--	--	--	--	100	--	30	--	--	--
NOV 03...	.03	--	--	--	--	90	--	50	--	--	--
DEC 01...	.06	--	--	--	--	150	--	50	--	--	--
01467300 - DELAWARE R AT WHARTON ST, PHILA., PA. (LAT 39 55 54 LONG 075 08 11)											
OCT , 1977 06...	.07	--	--	--	--	120	--	50	--	--	--
NOV 03...	.08	--	--	--	--	100	--	100	--	--	--
DEC 01...	.07	--	--	--	--	160	--	60	--	--	--
01467400 - DELAWARE R AT LEAGUE ISLAND, PHILA., PA. (LAT 39 52 56 LONG 075 10 43)											
OCT , 1977 06...	.05	--	--	--	--	180	--	90	--	--	--
NOV 03...	.04	--	--	--	--	150	--	140	--	--	--
DEC 01...	.05	--	--	--	--	180	--	90	--	--	--
SCHUYLKILL RIVER BASIN --Continued											
01472054 - PIGEON CREEK NEAR BUCKTOWN, PA. (LAT 40 11 50 LONG 075 40 10)											
OCT , 1977 20...	--	0	1	0	2	160	8	80	2	10	.00
01472065 - PIGEON CREEK NEAR PORTERS MILL, PA. (LAT 40 11 27 LONG 075 38 10)											
OCT , 1977 20...	--	0	1	0	2	130	9	60	2	10	.00
01472080 - PIGEON CREEK NEAR PARKER FORD, PA. (LAT 40 12 03 LONG 075 37 10)											
OCT , 1977 20...	--	0	1	0	2	140	10	60	0	0	.00
01472109 - STONY RUN NEAR SPRING CITY, PA. (LAT 40 10 11 LONG 075 34 45)											
OCT , 1977 20...	--	0	1	0	2	60	9	110	2	10	.00
01472110 - STONY RUN AT SPRING CITY, PA. (LAT 40 10 01 LONG 075 32 57)											
OCT , 1977 20...	--	0	1	0	6	130	8	110	2	20	.10
01472126 - FRENCH CREEK NEAR TRYTHALL, PA. (LAT 40 12 00 LONG 075 45 53)											
OCT , 1977 21...	--	0	0	0	2	240	0	70	1	10	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
SCHUYLKILL RIVER BASIN --Continued											
01472129 - FRENCH CREEK NEAR KNAURERTOWN, PA. (LAT 40 11 09 LONG 075 45 28)											
OCT , 1977											
21...	1200	90	6.8	12.0	10.5	35	12	9.4	2.7	3.7	1.4
01472130 - FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14 LONG 075 41 50)											
OCT , 1977											
21...	0930	130	6.9	10.5	10.5	51	22	13	4.4	5.0	1.7
01472140 - S BR FRENCH CR AT COVENTRYVILLE, PA. (LAT 40 09 18 LONG 075 42 52)											
OCT , 1977											
21...	1030	180	7.1	12.0	11.4	65	32	17	5.5	7.4	2.3
01472154 - FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 14 LONG 075 38 25)											
OCT , 1977											
21...	1500	160	6.8	13.0	11.2	57	23	15	4.8	6.8	2.2
01472161 - FRENCH CREEK AT PHOENIXVILLE, PA. (LAT 40 08 07 LONG 075 31 05)											
OCT , 1977											
19...	1330	245	7.1	12.5	11.6	94	58	25	7.7	9.6	2.8
01472170 - PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43 LONG 075 39 14)											
OCT , 1977											
19...	0930	205	7.2	10.5	10.8	73	27	19	6.1	7.9	2.6
01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22 LONG 075 37 50)											
OCT , 1977											
19...	1030	190	7.1	10.5	10.4	71	27	19	5.7	6.7	2.8
01472185 - PICKERING CREEK TRIB NR KIMBERTON, PA. (LAT 40 06 49 LONG 075 36 18)											
OCT , 1977											
19...	1130	190	7.1	10.5	10.5	69	36	18	5.9	7.0	2.8
01472188 - PICKERING CREEK AT CHARLESTOWN, PA. (LAT 40 06 05 LONG 075 34 17)											
OCT , 1977											
19...	1200	195	7.2	11.0	10.7	74	40	19	6.4	7.3	2.8
01472191 - PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33 LONG 075 31 42)											
OCT , 1977											
19...	1415	200	7.3	12.5	11.2	75	35	19	6.6	7.6	2.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
SCHUYLKILL RIVER BASIN --Continued											
01472129 - FRENCH CREEK NEAR KNAURERTOWN, PA. (LAT 40 11 09 LONG 075 45 28)											
OCT , 1977 21...	28	0	23	7.1	11	3.3	.0	13	68	59	.45
01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14 LONG 075 41 50)											
OCT , 1977 21...	35	0	29	7.0	15	6.9	.0	16	92	80	.54
01472140 - S BR FRENCH CR AT COVENTRYVILLE, PA. (LAT 40 09 18 LONG 075 42 52)											
OCT , 1977 21...	40	0	33	5.1	17	15	.1	20	127	104	2.7
01472154 - FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 14 LONG 075 38 25)											
OCT , 1977 21...	42	0	34	11	17	9.1	.0	17	109	93	1.3
01472161 - FRENCH CREEK AT PHOENIXVILLE, PA. (LAT 40 08 07 LONG 075 31 05)											
OCT , 1977 19...	44	0	36	5.6	42	13	.4	9.6	155	132	2.0
01472170 - PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43 LONG 075 39 14)											
OCT , 1977 19...	56	0	46	5.7	18	17	.1	19	127	118	.43
01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22 LONG 075 37 58)											
OCT , 1977 19...	53	0	43	6.7	18	13	.1	17	118	109	1.6
01472185 - PICKERING CREEK TRIB NR KIMBERTON, PA. (LAT 40 06 49 LONG 075 36 18)											
OCT , 1977 19...	40	0	33	5.1	20	15	.1	17	134	106	1.3
01472188 - PICKERING CREEK AT CHARLESTOWN, PA. (LAT 40 06 05 LONG 075 34 17)											
OCT , 1977 19...	41	0	34	4.1	21	15	.1	18	129	110	1.2
01472191 - PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33 LONG 075 31 42)											
OCT , 1977 19...	48	0	39	3.8	22	17	.1	17	102	116	1.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
SCHUYLKILL RIVER BASIN --Continued											
01472129 - FRENCH CREEK NEAR KNAURERTOWN, PA. (LAT 40 11 09 LONG 075 45 28)											
OCT , 1977 21...	--	.00	--	.45	--	.03	.36	.39	.84	.02	.00
01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14 LONG 075 41 50)											
OCT , 1977 21...	--	.01	--	.55	--	.00	.17	.17	.72	.01	.00
01472140 - S BR FRENCH CR AT COVENTRYVILLE, PA. (LAT 40 09 18 LONG 075 42 52)											
OCT , 1977 21...	--	.01	--	2.7	--	.00	.24	.24	2.9	.03	.01
01472154 - FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 14 LONG 075 38 25)											
OCT , 1977 21...	--	.00	--	1.3	--	.03	.27	.30	1.6	.02	.01
01472161 - FRENCH CREEK AT PHOENIXVILLE, PA. (LAT 40 08 07 LONG 075 31 05)											
OCT , 1977 19...	--	.02	--	2.0	--	.16	.47	.63	2.6	.08	.04
01472170 - PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43 LONG 075 39 14)											
OCT , 1977 19...	--	.00	--	.43	--	.02	.29	.31	.74	.09	.00
01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22 LONG 075 37 50)											
OCT , 1977 19...	--	.01	--	1.6	--	.04	.54	.58	2.2	.05	.01
01472185 - PICKERING CREEK TRIB NR KIMBERTON, PA. (LAT 40 06 49 LONG 075 36 18)											
OCT , 1977 19...	--	.00	--	1.3	--	.00	.36	.36	1.7	.03	.01
01472188 - PICKERING CREEK AT CHARLESTOWN, PA. (LAT 40 06 05 LONG 075 34 17)											
OCT , 1977 19...	--	.00	--	1.2	--	.00	.78	.78	2.0	.03	.01
01472191 - PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33 LONG 075 31 42)											
OCT , 1977 19...	--	.00	--	1.2	--	.00	.42	.42	1.6	.03	.01

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
SCHUYLKILL RIVER BASIN --Continued											
01472129 - FRENCH CREEK NEAR KNAURERTOWN, PA. (LAT 40 11 09 LONG 075 45 28)											
OCT , 1977 21...	--	0	0	0	2	200	1	70	1	10	.00
01472138 - FRENCH CREEK NEAR COVENTRYVILLE, PA. (LAT 40 10 14 LONG 075 41 50)											
OCT , 1977 21...	--	0	0	0	2	200	4	40	1	10	.00
01472140 - S BR FRENCH CR AT COVENTRYVILLE, PA. (LAT 40 09 10 LONG 075 42 52)											
OCT , 1977 21...	--	1	0	0	2	160	6	30	1	10	.00
01472154 - FRENCH CREEK NEAR PUGHTOWN, PA. (LAT 40 09 14 LONG 075 38 25)											
OCT , 1977 21...	--	1	0	0	2	200	0	40	1	0	.00
01472161 - FRENCH CREEK AT PHOENIXVILLE, PA. (LAT 40 08 07 LONG 075 31 05)											
OCT , 1977 19...	--	0	2	0	3	100	10	230	8	10	.30
01472170 - PICKERING CREEK NEAR EAGLE, PA. (LAT 40 04 43 LONG 075 39 14)											
OCT , 1977 19...	--	0	1	0	3	170	8	80	3	10	.00
01472174 - PICKERING CREEK NEAR CHESTER SPRINGS, PA. (LAT 40 05 22 LONG 075 37 50)											
OCT , 1977 19...	--	0	1	0	2	130	7	70	2	10	.00
01472185 - PICKERING CREEK TRIB NR KIMBERTON, PA. (LAT 40 06 49 LONG 075 36 10)											
OCT , 1977 19...	--	0	1	0	2	170	7	50	2	0	.00
01472188 - PICKERING CREEK AT CHARLESTOWN, PA. (LAT 40 06 05 LONG 075 34 17)											
OCT , 1977 19...	--	0	1	0	2	180	7	40	2	0	.00
01472191 - PICKERING CREEK NEAR PHOENIXVILLE, PA. (LAT 40 06 33 LONG 075 31 42)											
OCT , 1977 19...	--	0	1	0	3	150	9	20	3	10	.00

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
SCHUYLKILL RIVER BASIN--Continued											
01473167 - LITTLE VALLEY CR NR VALLEY FORGE, PA. (LAT 40 03 51 LONG 075 28 22)											
OCT , 1977 31...	1400	510	8.4	12.5	13.2	220	52	57	20	32	3.1
01473168 - VALLEY CREEK NR VALLEY FORGE, PA. (LAT 40 04 08 LONG 075 28 25)											
OCT , 1977 31...	1430	540	8.2	11.0	12.4	280	74	49	38	24	3.2
CRUM CREEK BASIN											
01475830 - EAST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 40 00 28 LONG 075 27 55)											
OCT , 1977 31...	0930	210	7.3	9.0	11.8	81	21	16	10	9.8	2.2
01475840 - WEST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 39 59 52 LONG 075 27 38)											
OCT , 1977 31...	1030	195	7.5	9.5	12.0	89	36	23	7.7	8.3	3.4
DELAWARE RIVER BASIN											
01476200 - DELAWARE R AT EDDYSTONE, PA. (LAT 39 50 57 LONG 075 19 43)											
OCT , 1977 06...	1115	--	--	18.5	--	67	43	18	5.4	14	2.6
NOV 03...	0900	--	--	14.0	--	49	31	13	4.1	11	2.1
DEC 01...	1245	--	--	8.0	--	68	41	18	5.6	11	2.4
RIDLEY CREEK BASIN											
01476430 - RIDLEY CREEK NEAR GOSHENVILLE, PA. (LAT 39 59 26 LONG 075 32 38)											
OCT , 1977 19...	1530	160	7.1	12.5	10.0	54	29	11	6.5	7.8	2.1
01476435 - RIDLEY CREEK NEAR DUTTON MILL, PA. (LAT 39 58 50 LONG 075 31 00)											
OCT , 1977 27...	1100	170	6.9	17.0	10.0	56	23	11	6.9	8.0	2.6
CHESTER CREEK BASIN											
01476790 - CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 59 49 LONG 075 35 40)											
OCT , 1977 18...	1130	200	6.3	12.5	11.5	61	34	13	6.9	11	1.7
01476830 - CHESTER CREEK NEAR MILLTOWN, PA. (LAT 39 58 21 LONG 075 32 57)											
OCT , 1977 18...	1245	240	6.6	13.5	11.0	83	31	19	8.7	9.8	3.6
01476835 - CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 21 LONG 075 32 28)											
OCT , 1977 18...	1400	220	6.9	12.5	10.6	77	33	18	7.7	10	4.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)
SCHUYLKILL RIVER BASIN--Continued											
01473167 - LITTLE VALLEY CR NR VALLEY FORGE, PA. (LAT 40 03 51 LONG 075 28 22)											
OCT , 1977											
31...	210	0	170	1.3	43	55	.2	7.5	343	321	3.5
01473168 - VALLEY CREEK NR VALLEY FORGE, PA. (LAT 40 04 08 LONG 075 28 25)											
OCT , 1977											
31...	250	0	210	2.5	69	38	.1	7.2	336	352	1.7
CRUM CREEK BASIN--Continued											
01475830 - EAST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 40 00 28 LONG 075 27 55)											
OCT , 1977											
31...	73	0	60	5.9	14	15	.1	15	128	118	1.8
01475840 - WEST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 39 59 52 LONG 075 27 38)											
OCT , 1977											
31...	65	0	53	3.3	--	--	--	--	--	--	1.6
DELAWARE RIVER BASIN--Continued											
01476200 - DELAWARE R AT EDDYSTONE, PA. (LAT 39 50 57 LONG 075 19 43)											
OCT , 1977											
06...	29	--	24	--	38	17	.1	2.6	128	117	--
NOV											
03...	22	--	18	--	35	14	.1	4.9	104	100	--
DEC											
01...	33	--	27	--	38	14	.1	6.3	119	118	--
RIDLEY CREEK BASIN--Continued											
01476430 - RIDLEY CREEK NEAR GOSHENVILLE, PA. (LAT 39 59 26 LONG 075 32 38)											
OCT , 1977											
19...	31	0	25	3.9	15	13	.0	12	103	93	2.3
01476435 - RIDLEY CREEK NEAR DUTTON MILL, PA. (LAT 39 58 50 LONG 075 31 00)											
OCT , 1977											
27...	40	0	33	8.1	14	13	.1	15	97	91	1.9
CHESTER CREEK BASIN--Continued											
01476790 - CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 59 49 LONG 075 35 40)											
OCT , 1977											
18...	33	0	27	26	17	22	.0	8.0	127	91	5.0
01476830 - CHESTER CREEK NEAR MILLTOWN, PA. (LAT 39 58 21 LONG 075 32 57)											
OCT , 1977											
18...	64	0	53	26	23	20	.1	12	150	128	1.7
01476835 - CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 21 LONG 075 32 28)											
OCT , 1977											
18...	53	0	43	11	22	16	.1	11	133	116	1.8

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
SCHUYLKILL RIVER BASIN--Continued											
01473167 - LITTLE VALLEY CR NR VALLEY FORGE, PA. (LAT 40 03 51 LONG 075 28 22)											
OCT , 1977 31...	--	.03	--	3.5	--	.04	.35	.39	3.9	.17	.15
01473168 - VALLEY CREEK NR VALLEY FORGE, PA. (LAT 40 04 08 LONG 075 28 25)											
OCT , 1977 31...	--	.01	--	1.7	--	.11	.44	.55	2.3	.04	.02
CRUM CREEK BASIN--Continued											
01475830 - EAST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 40 00 28 LONG 075 27 55)											
OCT , 1977 31...	--	.01	--	1.8	--	.01	.18	.19	2.0	.01	.01
01475840 - WEST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 39 59 52 LONG 075 27 38)											
OCT , 1977 31...	--	.00	--	1.6	--	.00	.14	.14	1.7	.01	.00
DELAWARE RIVER BASIN--Continued											
01476200 - DELAWARE R AT EDDYSTONE, PA. (LAT 39 50 57 LONG 075 19 43)											
OCT , 1977 06...	1.1	--	.05	--	1.1	--	--	--	--	--	--
NOV 03...	.89	--	.03	--	.92	--	--	--	--	--	--
DEC 01...	1.3	--	.04	--	1.3	--	--	--	--	--	--
RIDLEY CREEK BASIN--Continued											
01476430 - RIDLEY CREEK NEAR GOSHENVILLE, PA. (LAT 39 59 26 LONG 075 32 38)											
OCT , 1977 19...	--	.01	--	2.3	--	.01	.53	.54	2.8	.09	.06
01476435 - RIDLEY CREEK NEAR DUTTON MILL, PA. (LAT 39 58 50 LONG 075 31 00)											
OCT , 1977 27...	--	.02	--	1.9	--	.03	.34	.37	2.3	.06	.04
CHESTER CREEK BASIN--Continued											
01476790 - CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 59 49 LONG 075 35 40)											
OCT , 1977 18...	--	.00	--	5.0	--	.06	.12	.18	5.2	.01	.00
01476830 - CHESTER CREEK NEAR MILLTOWN, PA. (LAT 39 58 21 LONG 075 32 57)											
OCT , 1977 18...	--	.02	--	1.7	--	.43	.21	.64	2.3	.05	.01
01476835 - CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 21 LONG 075 32 28)											
OCT , 1977 18...	--	.11	--	1.9	--	.16	1.8	2.0	3.9	.34	.18

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
SCHUYLKILL RIVER BASIN--Continued											
01473167 - LITTLE VALLEY CR NR VALLEY FORGE, PA. (LAT 40 03 51 LONG 075 28 22)											
OCT , 1977 31...	--	0	2	0	3	30	2	30	0	10	.10
01473168 - VALLEY CREEK NR VALLEY FORGE, PA. (LAT 40 04 08 LONG 075 28 25)											
OCT , 1977 31...	--	0	1	0	9	120	1	60	1	10	.00
CRUM CREEK BASIN--Continued											
01475830 - EAST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 40 00 28 LONG 075 27 55)											
OCT , 1977 31...	--	0	0	0	2	120	4	10	0	0	.00
01475840 - WEST BRANCH CRUM CREEK NEAR PAOLI, PA. (LAT 39 59 52 LONG 075 27 38)											
OCT , 1977 31...	--	0	0	0	5	90	6	50	0	10	.00
DELAWARE RIVER BASIN--Continued											
01476200 - DELAWARE R AT EDDYSTONE, PA. (LAT 39 50 57 LONG 075 19 43)											
OCT , 1977 06...	.05	--	--	--	--	100	--	70	--	--	--
NOV 03...	.05	--	--	--	--	130	--	140	--	--	--
DEC 01...	.05	--	--	--	--	170	--	120	--	--	--
RIDLEY CREEK BASIN--Continued											
01476430 - RIDLEY CREEK NEAR GOSHENVILLE, PA. (LAT 39 59 26 LONG 075 32 38)											
OCT , 1977 19...	--	0	1	0	2	120	7	50	3	0	.00
01476435 - RIDLEY CREEK NEAR DUTTON MILL, PA. (LAT 39 58 50 LONG 075 31 00)											
OCT , 1977 27...	--	5	0	0	1	210	130	40	3	10	.00
CHESTER CREEK BASIN--Continued											
01476790 - CHESTER CREEK NEAR WEST CHESTER, PA. (LAT 39 59 49 LONG 075 35 48)											
OCT , 1977 18...	--	0	1	0	3	30	8	60	2	10	.00
01476830 - CHESTER CREEK NEAR MILLTOWN, PA. (LAT 39 58 21 LONG 075 32 57)											
OCT , 1977 18...	--	0	1	0	4	0	8	90	3	0	.00
01476835 - CHESTER CREEK AT WESTTOWN SCHOOL, PA. (LAT 39 56 21 LONG 075 32 28)											
OCT , 1977 18...	--	0	1	0	4	110	8	70	2	10	.00

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
CHESTER CREEK BASIN--Continued											
01476840 - GOOSE CREEK NEAR WEST CHESTER, PA. (LAT 39 56 01 LONG 075 33 31)											
OCT , 1977											
18...	1515	950	7.3	15.0	7.2	170	33	46	14	72	27
31...	1030	195	7.5	9.5	12.0	--	--	--	--	--	--
DELAWARE RIVER BASIN											
01477200 - DELAWARE R AT MARCUS HOOK PA (LAT 39 48 01 LONG 075 25 10)											
OCT , 1977											
06...	0950	251	--	18.5	--	79	49	21	6.4	17	2.9
NOV											
03...	0830	165	--	14.0	--	49	27	13	3.9	10	2.0
DEC											
01...	1200	200	--	7.5	--	65	29	17	5.4	11	2.5
CHRISTINA RIVER BASIN											
01478120 - WHITE CLAY CREEK NEAR AVONDALE, PA. (LAT 39 49 39 LONG 075 46 52)											
NOV , 1977											
01...	1330	260	8.3	13.0	13.4	130	53	29	13	7.4	3.0
01478190 - WHITE CLAY CREEK NEAR WICKERTON, PA. (LAT 39 47 44 LONG 075 49 27)											
NOV , 1977											
01...	1500	160	7.6	13.5	12.4	65	23	15	6.8	9.0	3.9
01478220 - W BR WHITE CLAY CR NR CHESTERVILLE, PA. (LAT 39 45 56 LONG 075 47 47)											
NOV , 1977											
01...	1530	140	7.4	13.0	12.0	45	18	11	4.3	7.0	4.4
01479780 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 50 13 LONG 075 43 33)											
NOV , 1977											
01...	1000	250	7.3	11.5	12.4	100	35	23	11	8.0	3.4
01479800 - RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11 LONG 075 41 29)											
NOV , 1977											
01...	1130	240	7.9	11.0	14.4	110	45	26	11	12	4.5
01480430 - W BR BRANDYWINE CR NR COATESVILLE, PA. (LAT 40 00 17 LONG 075 49 31)											
NOV , 1977											
02...	1530	180	8.5	14.5	11.4	67	27	16	6.5	6.8	2.8
01480629 - BUCK RUN NEAR DOE RUN, PA. (LAT 39 55 44 LONG 075 49 47)											
NOV , 1977											
02...	1430	220	7.4	14.5	10.8	75	32	19	6.8	10	2.7
01480632 - DOE RUN NEAR SPRINGDALE, PA. (LAT 39 54 21 LONG 075 49 42)											
NOV , 1977											
02...	1330	160	7.6	15.5	11.0	43	19	10	4.4	5.1	2.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)
CHESTER CREEK BASIN--Continued											
01476840 - GOOSE CREEK NEAR WEST CHESTER, PA. (LAT 39 56 01 LONG 075 33 31)											
OCT , 1977 18...	170	0	140	14	100	140	.1	20	525	503	2.1
31...	--	--	--	--	--	--	--	--	--	--	--
DELAWARE RIVER BASIN--Continued											
01477200 - DELAWARE R AT MARCUS HOOK PA (LAT 39 48 01 LONG 075 25 10)											
OCT , 1977 06...	36	--	30	--	41	22	.2	2.1	143	137	--
NOV 03...	26	--	21	--	32	14	.1	4.8	101	97	--
DEC 01...	43	--	35	--	36	15	.1	6.3	120	121	--
CHRISTINA RIVER BASIN--Continued											
01478120 - WHITE CLAY CREEK NEAR AVONDALE, PA. (LAT 39 49 39 LONG 075 46 52)											
NOV , 1977 01...	89	0	73	.7	23	14	.0	14	174	148	3.6
01478190 - WHITE CLAY CREEK NEAR WICKERTON, PA. (LAT 39 47 44 LONG 075 49 27)											
NOV , 1977 01...	52	0	43	2.1	--	--	--	--	--	--	3.6
01478220 - W BR WHITE CLAY CR NR CHESTERVILLE, PA. (LAT 39 45 56 LONG 075 47 47)											
NOV , 1977 01...	33	0	27	2.1	15	9.7	.0	13	91	81	2.0
01479780 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 50 13 LONG 075 43 33)											
NOV , 1977 01...	83	0	68	6.7	22	12	.0	15	150	135	3.2
01479800 - RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11 LONG 075 41 29)											
NOV , 1977 01...	79	0	65	1.6	33	21	.1	15	179	162	2.6
01480430 - W BR BRANDYWINE CR NR COATESVILLE, PA. (LAT 40 00 17 LONG 075 49 31)											
NOV , 1977 02...	49	0	40	.2	17	12	.1	14	106	100	2.0
01480629 - BUCK RUN NEAR DOE RUN, PA. (LAT 39 55 44 LONG 075 49 47)											
NOV , 1977 02...	53	0	43	3.4	18	19	.0	8.5	131	110	3.8
01480632 - DOE RUN NEAR SPRINGDALE, PA. (LAT 39 54 21 LONG 075 49 42)											
NOV , 1977 02...	29	0	24	1.2	7.6	10	.0	8.8	80	63	3.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)
CHESTER CREEK BASIN--Continued											
01476840 - GOOSE CREEK NEAR WEST CHESTER, PA. (LAT 39 56 01 LONG 075 33 31)											
OCT , 1977 18...	--	.61	--	2.7	--	31	33	64	67	5.4	4.5
31...	--	--	--	--	--	--	--	--	--	--	--
DELAWARE RIVER BASIN--Continued											
01477200 - DELAWARE R AT MARCUS HOOK PA (LAT 39 48 01 LONG 075 25 10)											
OCT , 1977 06...	1.4	--	.09	--	1.5	--	--	--	--	--	--
NOV 03...	.97	--	.03	--	1.0	--	--	--	--	--	--
DEC 01...	1.3	--	.04	--	1.3	--	--	--	--	--	--
CHRISTINA RIVER BASIN--Continued											
01478120 - WHITE CLAY CREEK NEAR AVONDALE, PA. (LAT 39 49 39 LONG 075 46 52)											
NOV , 1977 01...	--	.01	--	3.6	--	.02	.42	.44	4.0	.04	.02
01478190 - WHITE CLAY CREEK NEAR WICKERTON, PA. (LAT 39 47 44 LONG 075 49 27)											
NOV , 1977 01...	--	.08	--	3.7	--	.48	.52	1.0	4.7	.31	.27
01478220 - W BR WHITE CLAY CR NR CHESTERVILLE, PA. (LAT 39 45 56 LONG 075 47 47)											
NOV , 1977 01...	--	.01	--	2.0	--	.05	.33	.38	2.4	.01	.00
01479780 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 50 13 LONG 075 43 33)											
NOV , 1977 01...	--	.01	--	3.2	--	.09	.51	.60	3.8	.04	.01
01479800 - RED CLAY CREEK NFAR FIVE POINT, PA. (LAT 39 49 11 LONG 075 41 29)											
NOV , 1977 01...	--	.01	--	2.6	--	.02	.33	.35	3.0	.05	.03
01480430 - W BR BRANDYWINE CR NR COATESVILLE, PA. (LAT 40 00 17 LONG 075 49 31)											
NOV , 1977 02...	--	.01	--	2.0	--	.01	.31	.32	2.3	.04	.01
01480629 - BUCK RUN NEAR DOE RUN, PA. (LAT 39 55 44 LONG 075 49 47)											
NOV , 1977 02...	--	.02	--	3.8	--	.08	.92	1.0	4.8	.09	.05
01480632 - DOE RUN NEAR SPRINGDALE, PA. (LAT 39 54 21 LONG 075 49 42)											
NOV , 1977 02...	--	.01	--	3.4	--	.00	.27	.27	3.7	.04	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)
CHESTER CREEK BASIN--Continued											
01476840 - GOOSE CREEK NEAR WEST CHESTER, PA. (LAT 39 56 01 LONG 075 33 31)											
OCT , 1977											
18...	--	0	2	0	0	100	7	190	2	80	.10
31...	--	--	--	--	--	--	--	--	--	--	--
DELAWARE RIVER BASIN--Continued											
01477200 - DELAWARE R AT MARCUS HOOK PA (LAT 39 48 01 LONG 075 25 10)											
OCT , 1977											
06...	.05	--	--	--	--	60	--	80	--	--	--
NOV											
03...	.03	--	--	--	--	110	--	120	--	--	--
DEC											
01...	.07	--	--	--	--	160	--	100	--	--	--
CHRISTINA RIVER BASIN--Continued											
01478120 - WHITE CLAY CREEK NEAR AVONDALE, PA. (LAT 39 49 39 LONG 075 46 52)											
NOV , 1977											
01...	--	0	1	0	3	50	130	60	0	10	.00
01478150 - WHITE CLAY CREEK NEAR WICKERTON, PA. (LAT 39 47 44 LONG 075 49 27)											
NOV , 1977											
01...	--	0	1	0	3	100	2	70	0	20	.10
01478220 - W BR WHITE CLAY CR NR CHESTERVILLE, PA. (LAT 39 45 56 LONG 075 47 47)											
NOV , 1977											
01...	--	0	0	0	0	140	0	60	0	20	.00
01479780 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 50 13 LONG 075 43 33)											
NOV , 1977											
01...	--	0	1	0	3	90	5	40	0	20	.00
01479800 - RED CLAY CREEK NEAR FIVE POINT, PA. (LAT 39 49 11 LONG 075 41 29)											
NOV , 1977											
01...	--	0	0	0	4	110	6	70	0	10	.00
01480430 - W BR BRANDYWINE CR NR COATESVILLE, PA. (LAT 40 00 17 LONG 075 49 31)											
NOV , 1977											
02...	--	0	0	0	1	160	2	30	0	10	.00
01480629 - BUCK RUN NEAR DOE RUN, PA. (LAT 39 55 44 LONG 075 49 47)											
NOV , 1977											
02...	--	1	0	0	3	130	5	100	0	10	.00
01480632 - DOE RUN NEAR SPRINGDALE, PA. (LAT 39 54 21 LONG 075 49 42)											
NOV , 1977											
02...	--	0	0	0	1	40	3	20	0	10	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT , 1977											
27...	1430	230	7.3	17.0	9.0	80	20	20	7.3	10	3.0

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)
NOV , 1977										
03...	1100	9813	9813	230	--	--	--	80	--	20
FEB , 1978										
22...	1015	9813	9813	210	--	--	--	76	--	16
MAY										
30...	0940	9813	9813	210	--	--	--	62	--	15
AUG										
16...	1100	9813	9813	230	7.6	24.0	7.2	57	0	18

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
01480647 - E BR BRANDYWINE CR NR STRUBLE DAM, PA. (LAT 40 06 05 LONG 075 51 40)										
OCT , 1977										
25...	1030	180	6.0	13.0	11.9	66	17	16	6.3	6.3
01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41 LONG 075 51 14)										
OCT , 1977										
25...	0930	180	6.9	11.5	11.0	70	16	18	6.0	6.0
01480655 - EAST BR. BRANDYWINE CREEK NEAR GLENMOORE, PA. (LAT 40 04 25 LONG 075 49 01)										
OCT , 1977										
25...	1130	160	7.1	12.0	11.5	56	22	14	5.2	7.0
01480656 - INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 30 LONG 075 46 57)										
OCT , 1977										
25...	1230	165	--	11.5	11.6	54	17	15	4.1	8.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)
01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)											
OCT , 1977 27...	64	0	53	5.1	21	17	.2	10	129	121	2.0

DATE	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47;										
NOV , 1977 03...	8.2	52	16	19	110	--	182	3.0	.04	.11
FEB , 1978 22...	9.3	40	25	19	280	4	284	3.7	.04	.25
MAY 30...	6.6	40	25	15	146	10	156	2.6	.04	.13
AUG 16...	3.0	52	15	20	170	30	--	2.4	.03	.10

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATF DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
01480647 - E BR BRANDYWINE CR NR STRUBLE DAM, PA. (LAT 40 06 05 LONG 075 51 40)										
OCT , 1977 25...	3.5	60	0	49	15	12	11	.1	7.5	112
01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41 LONG 075 51 14)										
OCT , 1977 25...	3.0	66	0	54	13	12	9.9	.1	14	109
01480655 - EAST BR. BRANDYWINE CREEK NEAR GLENMOORE, PA. (LAT 40 04 25 LONG 075 49 01)										
OCT , 1977 25...	2.3	42	0	34	5.3	12	9.5	.1	14	107
01480656 - INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 30 LONG 075 46 57)										
OCT , 1977 25...	1.7	45	--	37	--	8.9	8.6	.0	26	122

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
OCT , 1977											
27...	--	.03	--	2.8	--	.02	.36	.38	3.2	.15	.11

01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV , 1977									
03...	.20	--	--	--	630	--	--	--	--
FEB , 1978									
22...	.13	--	--	--	230	--	--	--	--
MAY									
30...	.16	--	--	--	550	--	--	--	--
AUG									
16...	.20	<3	<10	<10	310	<50	60	<10	50

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
01480647 - E BR BRANDYWINE CR NR STRUBLE DAM, PA. (LAT 40 06 05 LONG 075 51 40)										
OCT , 1977										
25...	92	2.2	.01	2.2	.06	.59	.65	2.9	.04	.00
01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41 LONG 075 51 14)										
OCT , 1977										
25...	102	2.4	.01	2.4	.05	.38	.43	2.8	.99	.96
01480655 - EAST BR. BRANDYWINE CREEK NEAR GLENMOORE, PA. (LAT 40 04 25 LONG 075 49 01)										
OCT , 1977										
25...	85	2.0	.01	2.0	.01	.29	.30	2.3	.02	.01
01480656 - INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 30 LONG 075 46 57)										
OCT , 1977										
25...	95	2.9	.01	[illegible]	--	.43	.46	3.4	.13	.08

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
01480640 - WEST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 34 LONG 075 39 47)											
OCT , 1977 27...	--	0	1	0	4	170	6	70	10	0	.10

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
01480647 - E BR BRANDYWINE CR NR STRUBLE DAM, PA. (LAT 40 06 05 LONG 075 51 40)										
OCT , 1977 25...	<1	0	0	1	70	9	80	1	10	.00
01480648 - EAST BRANCH BRANDYWINE CREEK NEAR CUPOLA, PA. (LAT 40 05 41 LONG 075 51 14)										
OCT , 1977 25...	0	0	0	0	70	3	60	1	0	.00
01480655 - EAST BR. BRANDYWINE CREEK NEAR GLENMOORE, PA. (LAT 40 04 25 LONG 075 49 01)										
OCT , 1977 25...	<1	0	0	1	110	11	30	2	10	.00
01480656 - INDIAN RUN NEAR SPRINGTON, PA. (LAT 40 04 30 LONG 075 46 57)										
OCT , 1977 25...	0	0	0	1	50	5	10	1	0	.00

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS, PA. (LAT 39 58 31 LONG 075 39 48)										
OCT , 1977 26...	0930	320	7.6	13.0	10.2	170	65	34	21	11
01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 31 LONG 075 38 55)										
OCT , 1977 26...	1115	245	--	13.5	9.6	110	40	26	11	14
01494900 - ELK CREEK AT ELKVIEW, PA. (LAT 39 48 45 LONG 075 54 04)										
NOV , 1977 02...	1200	135	7.0	14.0	10.8	40	16	9.1	4.3	6.0
01494950 - ELK CREEK NEAR OXFORD, PA. (LAT 39 46 45 LONG 075 55 27)										
NOV , 1977 02...	1230	160	7.4	15.0	12.2	--	--	--	--	--

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
01480903 - VALLEY CREEK AT MULLSTEINS MEADOWS, PA. (LAT 39 58 31 LONG 075 39 48)										
OCT , 1977 26...	3.2	130	0	110	5.2	50	19	.1	4.5	204
01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 31 LONG 075 38 55)										
OCT , 1977 26...	3.4	86	--	71	--	28	19	.1	9.7	168
01494900 - ELK CREEK AT ELKVIEW, PA. (LAT 39 48 45 LONG 075 54 04)										
NOV , 1977 02...	3.1	30	0	25	4.8	6.4	9.6	.1	9.1	79
01494950 - ELK CREEK NEAR OXFORD, PA. (LAT 39 46 45 LONG 075 55 27)										
NOV , 1977 02...	--	30	0	25	1.9	10	15	.0	9.2	94

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)
01480903 - VALLEY CREEK AT HULLSTEINS MEADOWS, PA. (LAT 39 58 31 LONG 075 39 48)										
OCT , 1977 26...	207	2.9	.06	3.0	.02	.23	.25	3.3	.08	.06
01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 31 LONG 075 38 55)										
OCT , 1977 26...	154	2.2	.04	2.2	.10	.33	.43	2.6	.53	.50
01494900 - ELK CREEK AT ELKVIEW, PA. (LAT 39 48 45 LONG 075 54 04)										
NOV , 1977 02...	63	3.4	.02	3.4	.07	.29	.36	3.8	.18	.14
01494950 - ELK CREEK NEAR OXFORD, PA. (LAT 39 46 45 LONG 075 55 27)										
NOV , 1977 02...	--	3.8	.03	3.8	.11	.48	.59	4.4	.19	.15

DATE	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
01480903 - VALLEY CREEK AT HULLSTEINS MEADOWS, PA. (LAT 39 58 31 LONG 075 39 48)										
OCT , 1977 26...	0	1	0	1	30	5	10	3	10	.00
01480950 - EAST BRANCH BRANDYWINE CREEK AT WAWASET, PA. (LAT 39 55 31 LONG 075 38 55)										
OCT , 1977 26...	0	1	0	2	100	7	50	3	10	.00
01494900 - ELK CREEK AT ELKVIEW, PA. (LAT 39 48 45 LONG 075 54 04)										
NOV , 1977 02...	1	0	0	4	90	5	50	0	20	.00
01494950 - ELK CREEK NEAR OXFORD, PA. (LAT 39 46 45 LONG 075 55 27)										
NOV , 1977 02...	--	--	--	--	--	--	--	--	--	.00

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)
LACKAWAXEN RIVER BASIN									
01430200 - LACKAWAXEN RIVER AT WHITE MILLS, PA (LAT 41 31 30 LONG 075 11 20)									
NOV , 1977 16...	1025	9813	9813	70	--	--	40	--	8.0
FEB , 1978 15...	1200	9813	9813	100	--	--	24	--	8.8
MAY 25...	1500	9813	9813	60	--	--	28	--	8.0
AUG 03...	1415	9813	9813	110	27.0	10.8	47	0	14
01431600 - WALLENPAUPACK CREEK AT EAST STERLING, PA. (LAT 41 20 10 LONG 075 20 25)									
NOV , 1977 16...	1440	9813	9813	60	--	--	34	--	7.2
MAY , 1978 10...	1255	9813	9813	70	--	--	20	--	7.2
AUG 03...	1549	9813	9813	60	28.0	8.8	32	0	6.4
01432119 - LACKAWAXEN RIVER AT MOUTH AT LACKAWAXEN PA (LAT 41 29 12 LONG 074 59 31)									
NOV , 1977 16...	1340	9813	9813	60	--	--	40	--	6.4
FEB , 1978 15...	1510	9813	9813	60	--	--	14	--	8.0
MAY 25...	1500	9813	9813	60	--	--	20	--	6.4
AUG 03...	1459	9813	9813	70	29.0	7.0	32	0	9.6
BRODHEAD CREEK BASIN									
01440650 - BRODHEAD CREEK NEAR ANALOMINK, PA (LAT 41 02 07 LONG 075 12 45)									
NOV , 1977 15...	1200	9813	9813	50	--	--	10	--	5.6
FEB , 1978 23...	1400	9813	9813	50	--	--	24	--	5.6
MAY 17...	1310	9813	9813	50	--	--	10	--	4.0
JUL 27...	1400	9813	9813	60	--	--	28	--	5.6
MARTINS CREEK BASIN									
01446655 - MARTINS CREEK AT MARTINS CREEK, PA. (LAT 40 46 42 LONG 075 10 36)									
NOV , 1977 16...	0955	9813	9813	270	--	--	110	0	28
FEB , 1978 22...	1030	9813	9813	290	.5	14.0	118	0	32
MAY 23...	0950	9813	9813	280	--	--	105	--	24
AUG 23...	1000	9813	9813	410	16.0	9.0	130	0	40

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
LACKAWAXEN RIVER BASIN--Continued									
01430200 - LACKAWAXEN RIVER AT WHITE MILLS, PA (LAT 41 31 30 LONG 075 11 20)									
NOV , 1977 16...	5.5	16	14	6.0	30	0	.74	.01	.09
FEB , 1978 15...	.5	24	8.0	14	68	--	1.0	.02	.10
MAY 25...	2.2	22	5.0	6.0	38	--	.59	.02	.08
AUG 03...	3.0	32	15	8.0	78	--	.56	.02	.08
01431600 - WALLENPAUPACK CREEK AT EAST STERLING, PA. (LAT 41 20 10 LONG 075 20 25)									
NOV , 1977 16...	4.4	14	14	6.0	48	0	.66	.02	.07
MAY , 1978 10...	.5	14	6.0	8.0	54	--	.58	.02	.12
AUG 03...	4.0	18	20	6.0	54	--	.36	.01	.06
01432119 - LACKAWAXEN RIVER AT MOUTH AT LACKAWAXEN PA (LAT 41 29 12 LONG 074 59 31)									
NOV , 1977 16...	6.6	16	10	6.0	34	2	.58	.02	.07
FEB , 1978 15...	.0	28	10	7.0	36	--	.78	.02	.11
MAY 25...	1.1	18	5.0	7.0	42	--	.62	.02	.08
AUG 03...	2.0	20	15	6.0	82	--	.44	.01	.09
BRODHEAD CREEK BASIN--Continued									
01440650 - BRODHEAD CREEK NEAR ANALOMINK, PA (LAT 41 02 07 LONG 075 12 45)									
NOV , 1977 15...	.0	12	10	7.0	56	2	.66	.03	.06
FEB , 1978 23...	2.7	16	8.0	8.0	8	--	.54	.32	.07
MAY 17...	.0	10	12	8.0	56	--	.60	.01	.24
JUL 27...	3.8	16	15	6.0	54	--	.50	.01	.07
MARTINS CREEK BASIN--Continued									
01446655 - MARTINS CREEK AT MARTINS CREEK, PA. (LAT 40 46 42 LONG 075 10 36)									
NOV , 1977 16...	11	40	56	16	198	0	1.7	.05	.10
FEB , 1978 22...	10	46	64	17	244	--	2.4	.04	.35
MAY 23...	11	42	56	14	184	--	2.5	.04	.13
AUG 23...	7.0	58	70	21	292	--	3.3	.04	.06

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
LACKAWAXEN RIVER BASIN--Continued									
01430200 - LACKAWAXEN RIVER AT WHITE MILLS, PA (LAT 41 31 30 LONG 075 11 20)									
NOV , 1977									
16...	.06	--	--	--	130	--	--	--	--
FEB , 1978									
15...	.11	--	--	--	200	--	--	--	--
MAY									
25...	.14	--	--	--	200	--	--	--	--
AUG									
03...	.14	--	--	--	120	--	--	--	--
01431600 - WALLENPAUPACK CREEK AT EAST STERLING, PA. (LAT 41 20 10 LONG 075 20 25)									
NOV , 1977									
16...	.05	--	--	--	150	--	--	--	--
MAY , 1978									
10...	.09	--	--	--	140	--	--	--	--
AUG									
03...	.05	--	--	--	150	--	--	--	--
01432119 - LACKAWAXEN RIVER AT MOUTH AT LACKAWAXEN PA (LAT 41 29 12 LONG 074 59 31)									
NOV , 1977									
16...	.06	--	--	--	112	--	--	--	--
FEB , 1978									
15...	.10	--	--	--	150	--	--	--	--
MAY									
25...	.11	--	--	--	170	--	--	--	--
AUG									
03...	.05	--	--	--	50	--	--	--	--
BRODHEAD CREEK BASIN--continued									
01440650 - BRODHEAD CREEK NEAR ANALOMINK, PA (LAT 41 02 07 LONG 075 12 45)									
NOV , 1977									
15...	.05	--	--	--	90	--	--	--	--
FEB , 1978									
23...	.22	--	-	--	40	--	--	--	--
MAY									
17...	.05	--	--	--	170	--	--	--	--
JUL									
27...	.12	--	--	--	<10	--	--	--	--
MARTINS CREEK BASIN--Continued									
01446655 - MARTINS CREEK AT MARTINS CREEK, PA. (LAT 40 46 42 LONG 075 10 36)									
NOV , 1977									
16...	.18	--	--	--	180	--	10	--	--
FEB , 1978									
22...	.22	--	--	--	130	--	30	--	--
MAY									
23...	.70	--	--	--	310	--	30	--	--
AUG									
23...	2.0	<3	<10	10	160	<50	10	<10	10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)
LEHIGH RIVER BASIN										
01448850 - BLACK CREEK AT WEATHERLY, PA. (LAT 40 55 52 LONG 075 49 20)										
NOV , 1977										
17...	1135	9813	9813	90	10.0	11.1	24	12	4.0	3.8
FEB , 1978										
22...	1230	9813	9813	130	1.0	13.2	58	18	6.4	11
MAY										
25...	1125	9813	9813	50	14.0	9.4	20	6	5.6	1.6
AUG										
03...	1015	9813	9813	250	18.0	8.7	84	36	8.0	16
01448901 - NESQUEHONING CREEK AT JIM THORPE, PA (LAT 40 52 31 LONG 075 45 47)										
NOV , 1977										
17...	1250	9813	9813	500	--	10.6	336	6	45	61
MAY , 1978										
25...	1235	9813	9813	400	14.5	9.2	240	0	36	41
AUG										
30...	0945	9813	9813	600	15.0	9.0	360	38	62	51
01450020 - POHOPOCO CREEK AT PARRYVILLE, PA. (LAT 40 48 57 LONG 075 40 21)										
NOV , 1977										
21...	0945	9813	9813	50	8.0	11.1	14	0	4.8	.5
FEB , 1978										
23...	1045	9813	9813	60	.5	13.6	24	0	4.0	3.8
MAY										
25...	1025	9813	9813	70	12.0	10.2	10	0	5.6	.0
AUG										
30...	1055	9813	9813	60	12.0	8.3	24	0	5.6	2.5
01452400 - MONOCACY CREEK NEAR BETHLEHEM, PA. (LAT 40 41 13 LONG 075 20 26)										
NOV , 1977										
16...	1215	9813	9813	410	9.0	11.3	180	0	50	14
FEB , 1978										
21...	1335	9813	9813	500	5.0	--	168	0	68	.0
MAY										
23...	1230	9813	9813	480	15.5	10.0	190	0	53	15
AUG										
23...	1320	9813	9813	500	14.0	11.6	295	0	67	31
01452600 - MONOCACY CR AT BETHLEHEM, PA. (LAT 40 37 01 LONG 075 22 52)										
NOV , 1977										
21...	1320	9813	9813	470	8.0	11.2	200	--	56	15
FEB , 1978										
27...	0930	9813	9813	500	5.0	13.4	245	--	56	28
MAY										
23...	1345	9813	9813	490	16.0	9.7	200	--	47	22
AUG										
24...	1045	9813	9813	500	14.5	10.4	280	0	61	31

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LEHIGH RIVER BASIN--Continued

01448850 - BLACK CREEK AT WEATHERLY, PA. (LAT 40 55 52 LONG 075 49 20)

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV , 1977 17...	4	30	6.0	164	--	--	.76	.02	.20	.08
FEB , 1978 22...	6	38	7.0	176	--	--	.84	.03	.43	.16
MAY 25...	8	10	8.0	52	--	--	.63	.03	.14	.09
AUG 03...	2	45	10	198	--	--	.76	.01	.42	.11

01448901 - NESQUEHONING CREEK AT JIM THORPE, PA (LAT 40 52 31 LONG 075 45 47)

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV , 1977 17...	18	290	5.0	120	--	--	.44	.01	.20	.05
MAY , 1978 25...	6	220	7.0	370	--	--	.48	.02	.18	.09
AUG 30...	18	300	6.0	582	--	--	.46	.02	.22	.23

01450020 - POHOPOCO CREEK AT PARRYVILLE, PA. (LAT 40 48 57 LONG 075 40 21)

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV , 1977 21...	16	8.0	8.0	44	--	--	1.0	.01	.09	.05
FEB , 1978 23...	20	4.0	11	168	--	--	1.1	.02	.06	.10
MAY 25...	10	5.0	9.0	68	--	--	1.1	.02	.10	.09
AUG 30...	14	5.0	9.0	84	--	--	.92	.02	.06	.23

01452400 - MONOCACY CREEK NEAR BETHLEHEM, PA. (LAT 40 41 13 LONG 075 20 26)

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV , 1977 16...	92	74	14	272	0	--	4.4	.03	.07	.09
FEB , 1978 21...	172	110	19	384	--	--	.44	.04	.08	.09
MAY 23...	104	82	15	348	--	--	4.3	.03	.12	2.8
AUG 23...	142	85	15	352	--	--	3.7	.02	.06	.08

01452600 - MONOCACY CR AT BETHLEHEM, PA. (LAT 40 37 01 LONG 075 22 52)

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DISSOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV , 1977 21...	144	80	16	358	2	360	3.7	.03	.11	.06
FEB , 1978 27...	178	78	21	322	22	344	5.0	.01	.10	1.5
MAY 23...	126	70	16	240	46	286	3.7	.03	.12	.47
AUG 24...	178	70	19	416	16	--	4.2	.02	.05	.11

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
LEHIGH RIVER BASIN--Continued									
01448850 - BLACK CREEK AT WEATHERLY, PA. (LAT 40 55 52 LONG 075 49 20)									
NOV , 1977									
17...	1010	--	--	--	350	--	250	--	--
FEB , 1978									
22...	1960	--	--	--	400	--	480	--	--
MAY									
25...	440	--	--	--	250	--	100	--	--
AUG									
03...	5160	--	--	--	430	--	--	--	--
01448901 - NESQUEHONING CREEK AT JIM THORPE, PA (LAT 40 52 31 LONG 075 45 47)									
NOV , 1977									
17...	2220	--	--	--	4900	--	1790	--	--
MAY , 1978									
25...	1900	--	--	--	5500	--	1640	--	--
AUG									
30...	1400	<3	<10	20	3400	<50	2360	90	200
01450020 - POHOPOCO CREEK AT PARRYVILLE, PA. (LAT 40 48 57 LONG 075 40 21)									
NOV , 1977									
21...	--	--	--	--	190	--	120	--	--
FEB , 1978									
23...	--	--	--	--	80	--	20	--	--
MAY									
25...	--	--	--	--	190	--	40	--	--
AUG									
30...	--	<3	<10	10	140	<50	70	<10	<10
01452400 - MONOCACY CREEK NEAR BETHLEHEM, PA. (LAT 40 41 13 LONG 075 20 26)									
NOV , 1977									
16...	--	--	--	--	260	--	--	--	--
FEB , 1978									
21...	--	--	--	--	420	--	--	--	--
MAY									
23...	--	--	--	--	530	--	--	--	--
AUG									
23...	--	<3	<10	<10	90	<50	<10	<10	<10
01452600 - MONOCACY CR AT BETHLEHEM, PA. (LAT 40 37 01 LONG 075 22 52)									
NOV , 1977									
21...	--	--	--	--	150	--	30	--	--
FEB , 1978									
27...	--	--	--	--	120	--	40	--	--
MAY									
23...	--	--	--	--	400	--	80	--	--
AUG									
24...	--	<3	<10	10	180	<50	40	10	<10

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY CO2 (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)
01473140 - SKIPPACK CREEK AT ARCOLA, PA. (LAT 40 09 01 LONG 075 26 46)										
NOV , 1977										
02...	1500	9813	9813	600	--	--	--	150	--	36
FEB , 1978										
14...	1300	9813	9813	440	--	--	--	118	--	46
AUG										
07...	1000	9813	9813	700	8.4	25.0	5.9	134	0	32
01473170 - VALLEY CRK AT WILSON ROAD NEAR VALLEY FORGE, PA (LAT 40 04 53 LONG 075 27 25)										
NOV , 1977										
02...	1400	9813	9813	500	--	--	--	236	--	48
FEB , 1978										
14...	1100	9813	9813	460	--	--	--	175	--	20
MAY										
18...	1200	9813	9813	400	--	--	--	183	--	28
AUG										
09...	1400	9813	9813	500	8.9	22.0	10.3	186	0	46
01476510 - RIDLEY CREEK NR GRADYVILLE, PA. (LAT 39 52 28 LONG 075 22 56)										
NOV , 1977										
28...	1015	9813	9813	190	--	--	--	58	--	13
FEB , 1978										
16...	1100	9813	9813	220	--	--	--	74	--	11
MAY										
23...	1300	9813	9813	210	--	--	--	75	--	12
AUG										
17...	1200	9813	9813	240	8.0	24.0	8.5	61	0	15
01478240 - WHITE CLAY CREEK NEAR STRICKERSVILLE, PA. (LAT 39 44 54 LONG 075 46 12)										
NOV , 1977										
03...	1300	9813	9813	170	--	--	--	54	--	12
FEB , 1978										
22...	1100	9813	9813	230	--	--	--	94	--	21
MAY										
30...	1045	9813	9813	250	--	--	--	82	--	20
AUG										
14...	1200	9813	9813	240	8.3	22.5	8.1	81	0	23
01479820 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 49 00 LONG 075 41 31)										
NOV , 1977										
03...	1200	9813	9813	370	--	--	--	114	--	28
FEB , 1978										
22...	1030	9813	9813	290	--	--	--	100	--	24
MAY										
30...	1115	9813	9813	290	--	--	--	98	--	25
AUG										
14...	1100	9813	9813	320	8.1	23.5	7.9	99	0	26
01480960 - EAST BR BRANDYWINE CR NR SCONNELLTOWN, PA. (LAT 39 56 20 LONG 075 38 13)										
NOV , 1977										
03...	1000	9813	9813	290	--	--	--	98	--	24
FEB , 1978										
22...	1000	9813	9813	250	--	--	--	54	--	20
MAY										
30...	0930	9813	9813	230	--	--	--	70	--	16
AUG										
16...	1200	9813	9813	300	8.1	24.0	7.8	94	0	24

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NITRATE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
01473140 - SKIPPACK CREEK AT ARCOLA, PA. (LAT 40 09 01 LONG 075 26 46)										
NOV , 1977										
02...	15	104	54	33	400	8	408	3.9	.17	.29
FEB , 1978										
14...	.5	82	38	74	174	<10	184	3.5	.05	2.5
AUG										
07...	25	108	40	130	496	26	--	3.1	.18	.35
01473170 - VALLEY CRK AT WILSON ROAD NEAR VALLEY FORGE, PA (LAT 40 04 53 LONG 075 27 25)										
NOV , 1977										
02...	31	178	56	48	432	2	434	2.4	.04	.09
FEB , 1978										
14...	34	174	18	44	166	<10	176	2.8	.02	.15
MAY										
18...	31	150	46	37	318	28	346	2.2	.04	.20
AUG										
09...	17	176	35	45	382	14	--	2.6	.02	10
01476510 - RIDLEY CREEK NR GRADYVILLE, PA. (LAT 39 52 28 LONG 075 22 56)										
NOV , 1977										
28...	6.6	40	20	21	104	16	120	2.2	.04	.36
FEB , 1978										
16...	12	40	24	27	8	38	46	3.0	.04	.54
MAY										
23...	11	38	24	21	80	16	96	2.5	.06	.12
AUG										
17...	6.0	44	15	23	178	<5	--	2.4	.14	.22
01478240 - WHITE CLAY CREEK NEAR STRICKERSVILLE, PA. (LAT 39 44 54 LONG 075 46 12)										
NOV , 1977										
03...	6.0	40	8.0	13	16170	0	120	2.2	.03	.10
FEB , 1978										
22...	11	54	26	18	44	6	50	5.9	.05	.44
MAY										
30...	8.2	60	25	13	174	10	184	3.0	.04	.10
AUG										
14...	6.0	62	15	16	204	52	--	3.0	.07	.16
01479820 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 49 00 LONG 075 41 31)										
NOV , 1977										
03...	12	78	28	32	2600	0	248	3.7	.13	.22
FEB , 1978										
22...	10	60	16	24	112	4	116	5.5	.04	.30
MAY										
30...	9.3	66	30	18	206	10	216	3.6	.05	.14
AUG										
14...	8.5	72	25	20	232	24	--	3.4	.06	.12
01480940 - EAST BR BRANDYWINE CR NR SCONNELLTOWN, PA. (LAT 39 56 20 LONG 075 38 13)										
NOV , 1977										
03...	10	76	20	23	--	0	200	2.2	.06	.26
FEB , 1978										
22...	1.1	64	24	22	222	12	234	3.0	.05	.60
MAY										
30...	7.7	52	15	17	150	20	170	.14	.04	.14
AUG										
16...	8.0	76	20	22	210	30	--	1.5	.06	.18

WATER-QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
01473140 - SKIPPACK CREEK AT ARCOLA, PA. (LAT 40 09 01 LONG 075 26 46)									
NOV , 1977									
02...	1.2	--	--	--	260	--	--	--	--
FEB , 1978									
14...	.76	--	--	--	4550	--	--	--	--
AUG									
07...	--	<3	10	<10	580	<50	140	10	10
01473170 - VALLEY CRK AT WILSON ROAD NEAR VALLEY FORGE, PA (LAT 40 04 53 LONG 075 27 25)									
NOV , 1977									
02...	.08	--	--	--	150	--	--	--	--
FEB , 1978									
14...	.07	--	--	--	0	--	--	--	--
MAY									
18...	.12	--	--	--	1180	--	--	--	--
AUG									
09...	.07	<3	<10	10	320	<50	30	<10	40
01476510 - RIDLEY CREEK NR GRADYVILLE, PA. (LAT 39 52 28 LONG 075 22 56)									
NOV , 1977									
28...	.36	--	--	--	410	--	--	--	--
FEB , 1978									
16...	.25	--	--	--	840	--	--	--	--
MAY									
23...	1.1	--	--	--	440	--	--	--	--
AUG									
17...	.53	<3	<10	<10	360	<50	30	<10	10
01478240 - WHITE CLAY CREEK NEAR STRICKERSVILLE, PA. (LAT 39 44 54 LONG 075 46 12)									
NOV , 1977									
03...	.12	--	--	--	110	--	--	--	--
FEB , 1978									
22...	.14	--	--	--	240	--	--	--	--
MAY									
30...	.20	--	--	--	260	--	--	--	--
AUG									
14...	.25	<3	<10	10	2250	<50	80	30	<10
01479820 - RED CLAY CREEK NEAR KENNETT SQUARE, PA. (LAT 39 49 00 LONG 075 41 31)									
NOV , 1977									
03...	.65	--	--	--	200	--	--	--	--
FEB , 1978									
22...	.35	--	--	--	280	--	--	--	--
MAY									
30...	.24	--	--	--	5450	--	--	--	--
AUG									
14...	.30	<3	<10	10	870	<50	60	30	70
01480940 - EAST BR BRANDYWINE CR NR SCONNELLTOWN, PA. (LAT 39 56 20 LONG 075 38 13)									
NOV , 1977									
03...	.64	--	--	--	420	--	--	--	--
FEB , 1978									
22...	.26	--	--	--	210	--	--	--	--
MAY									
30...	.21	--	--	--	350	--	--	--	--
AUG									
16...	.50	<3	<10	<10	240	<50	50	10	30

BERKS COUNTY

402615075530501. Local number, BE 623.

LOCATION.--Lat 40°26'15", long 75°53'05", Hydrologic Unit 02040203, at Wesner Road, Blandon.
Owner: Maiden Creek Township Water Authority.
AQUIFER.--Leithsville Formation of Middle Cambrian age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (20 cm), depth 385 ft (117 m), casing information not available.
DATUM.--Altitude of land-surface datum is 430 ft (131 m). Measuring point: Top of casing, 1.30 ft (39 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--January 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 118.55 ft (36.134 m) below land-surface datum, Apr. 15, 1975; lowest, 137.49 ft (41.91 m) below land-surface datum, Nov. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.22	137.49	133.86	126.24	120.03	123.85	---	119.90	116.24	122.39	127.75	129.89
10	137.29	136.60	132.90	125.23	119.87	124.71	---	120.80	117.06	123.29	127.42	---
15	137.32	135.90	132.11	---	120.74	125.02	---	120.51	118.10	124.27	127.88	---
20	137.17	135.79	129.86	---	121.30	124.00	117.02	117.93	---	125.28	128.53	---
25	137.22	135.55	127.33	124.37	122.26	122.12	117.98	116.65	120.33	126.23	129.08	131.70
EOM	137.42	135.16	126.14	121.14	122.73	117.99	118.78	115.75	121.48	127.15	129.40	132.04

WTR YR 1978 HIGH 115.75 MAY 31 LOW 137.49 NOV 5

BUCKS COUNTY

402643075150501. Local number, BK 929.

LOCATION.--Lat 40°26'43", long 75°15'05", Hydrologic Unit 02040105, at Nockamixon State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Shale of Brunswick Formation of Upper Triassic age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 116 ft (35.4 m), cased to 27 ft (8.2 m), open hole.
DATUM.--Altitude of land-surface datum is 460 ft (140 m). Measuring point: Top of casing, 1.05 ft (32 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--November 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.72 ft (13.33 m) below land-surface datum, May 31, 1978; lowest, 59.75 ft (18.212 m) below land-surface datum, Nov. 26, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.44	50.70	47.04	45.78	44.95	46.67	---	45.57	44.14	46.66	48.27	45.74
10	52.48	49.94	47.02	45.69	44.89	46.51	---	45.87	44.75	46.60	47.58	46.02
15	52.06	49.31	46.53	45.40	45.57	46.53	---	45.41	45.26	46.77	46.93	45.90
20	51.64	49.13	46.03	44.88	45.75	45.92	---	44.71	45.51	47.29	46.20	46.04
25	51.28	48.28	45.09	44.83	45.98	---	45.13	44.11	45.93	47.58	46.12	45.78
EOM	50.93	48.03	45.44	44.71	46.38	---	44.97	43.72	46.29	47.88	46.37	46.00

WTR YR 1978 HIGH 43.72 MAY 31 LOW 53.04 OCT 7

CARBON COUNTY

410123075425401. Local number, CB 104

LOCATION.--Lat 41°01'23", long 75°42'54", Hydrologic Unit 02040106, at Hickory Run State Park. Owner: U.S. Geological Survey.
AQUIFER.--Shale of Lower Member of Mauch Chunk Formation of Upper Mississippian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 125 ft (38.1 m), cased to 20 ft (6.1 m), open hole.
DATUM.--Altitude of land-surface datum is 1,290 ft (393 m). Measuring point: Top of casing, 3.00 ft (91 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--September 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.10 ft (6.431 m) below land-surface datum Dec. 28, 1974; lowest, 83.51 ft (25.454 m) below land-surface datum, Nov. 8, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	33.35	---	---	57.76	---	50.47	38.92	60.93	73.35	79.30
10	---	---	36.43	---	---	60.53	---	52.53	43.75	63.37	74.55	80.05
15	---	---	39.69	28.58	---	61.60	---	43.55	47.09	65.69	---	80.72
20	---	---	32.81	33.85	---	41.40	---	22.12	50.80	67.92	---	81.19
25	25.25	40.23	---	39.41	52.29	27.00	45.83	26.41	---	69.88	77.45	80.85
EOM	---	41.50	---	---	54.45	---	47.65	32.49	58.01	71.87	78.48	81.07

WTR YR 1978 HIGH 22.12 MAY 20 LOW 81.19 SEP 20

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

CHESTER COUNTY

395450075485401. Local number, CH 10

LOCATION.--Lat 39°54'50", long 75°48'54", Hydrologic Unit 02040205, at Route 841 and Route 82, Doe Run. Owner: Robert J. Kleberg, Jr.
AQUIFER.--Cockeysville Marble of Paleozoic age.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in (15 cm), depth 34 ft (10.4 m), casing information not available.
DATUM.--Altitude of land-surface datum is 300 ft (91 m). Measuring point: Top of casing, 1.00 ft (30 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--August 1951 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.28 ft (2.524 m) below land-surface datum, March 30, 1958; lowest, 16.22 ft (4.944 m) below land-surface datum, Nov. 3, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.83	14.54	11.95	11.36	---	12.59	10.57	12.23	11.81	10.55	11.72	12.04
10	14.79	13.41	12.16	10.32	---	12.73	---	12.36	12.11	11.10	11.66	12.32
15	14.72	13.31	12.29	10.26	---	---	---	---	12.32	11.59	11.85	12.54
20	14.37	13.47	10.08	10.38	---	---	---	---	12.54	11.97	12.21	12.63
25	14.48	12.99	9.77	10.75	12.26	10.99	11.65	10.98	12.55	12.28	12.42	12.79
EOM	14.53	12.40	10.80	10.65	12.40	10.05	11.94	11.48	12.02	11.48	11.73	12.97

WTR YR 1978 HIGH 9.56 MAR 28 LOW 14.85 OCT 8 AND OTHERS

395040075341801. Local number, DE 3.

LOCATION.--Lat 39°50'40", long 75°34'18", Hydrologic Unit 02040205, at Birmingham Township.
Owner: Mrs. Hope W. Ebert

AQUIFER.--Gneiss of Wissahickon Formation (age uncertain, Lower Paleozoic to Precambrian).

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 42 in (107 cm), depth 22 ft (6.7 m), cased with stone.

DATUM.--Altitude of land-surface datum is 260 ft (79 m). Measuring point: Top of concrete base, 1.8 ft (55 cm) above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--June 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.90 ft (2.408 m) below land-surface datum, Aug. 22, 1955; lowest measured, dry many times since 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	17.78	DEC 5	13.17	FEB 6	10.80	APR 3	10.32	JUN 5	12.70	AUG 7	14.80
10	17.92	12	12.82	13	12.19	10	11.76	12	13.38	14	14.97
17	18.03	19	12.18	20	13.03	17	12.72	19	13.91	21	15.09
24	18.13	26	10.40	27	13.61	24	13.27	26	14.23	28	14.95
31	18.20	JAN 2	11.49	MAR 6	14.06	MAY 1	13.64	JUL 3	14.50	SEPT 4	14.49
NOV 7	18.18	9	12.15	13	16.02	8	13.95	10	13.69	11	14.24
14	16.25	16	12.39	20	13.25	15	13.16	17	13.70	18	14.38
21	15.28	23	11.46	27	11.85	22	11.19	24	14.15	25	14.68
28	14.37	30	8.23			29	11.87	31	14.56		

WTR YR 1977 HIGH 11.51 APR 11 LOW 18.20 OCT 31

LACKAWANNA COUNTY

411310075375501. Local number, LK 4.

LOCATION.--Lat 41°13'10", long 75°37'55", Hydrologic Unit 02040106, at Lackawanna State Forest.
Owner: Commonwealth of Pennsylvania.

AQUIFER.--Shale and sandstone of Catskill Formation of Upper Devonian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in (91 cm), depth 10 ft (3.0 m).

DATUM.--Altitude of land-surface datum is 1,910 ft (582 m). Measuring point: Wooden cover, 0.4 ft (12 cm) above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--June 1953 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.40 ft (43 cm) below land-surface datum, June 29, 1973; lowest measured, dry, October, November 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	3.33	DEC 2	2.74	FEB 3	3.64	APR 7	2.97	JUL 14	4.53	SEPT 1	3.80
20	3.12	9	3.45	17	3.77	MAY 12	3.49	28	5.05	21	3.50
28	3.55	20	3.46	MAR 10	3.93	19	2.66	AUG 18	4.50	--	----
NOV 4	3.59	30	3.61	24	2.30	JUN 2	3.66	25	5.06	--	----
14	3.48	JAN 6	3.72	31	3.07	9	3.40	--	----	--	----
21	3.51	13	3.50	--	----	16	3.66	--	----	--	----
25	3.59	--	----	--	----	--	----	--	----	--	----

WTR YR 1978 HIGH 2.30 MAR 24 LOW 5.06 AUG 25

402207076180801. Local number, LB 372.

LOCATION.--Lat 40°22'07", long 76°18'08", Hydrologic Unit 02040203, at Myerstown.
Owner: Kohl Brothers, Inc.
AQUIFER.--Dolomite of Ontelaunee Formation of Middle Ordovician age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (15 cm), depth 80 ft (24.4 m), casing information not available, open hole.
DATUM.--Altitude of land-surface datum is 444 ft (135 m). Measuring point: Top of casing, 3.5 ft (1.07 m) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--July 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.02 ft (1.23 m) below land-surface datum, Jan. 27, 1976; lowest, 10.51 ft (3.20 m) below land-surface datum, Nov. 27, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.76	9.10	7.33	7.09	6.81	8.15	6.61	7.61	7.43	8.02	8.63	8.81
10	8.92	8.71	7.39	6.32	7.08	8.33	6.75	7.76	7.62	8.29	8.17	8.91
15	8.40	8.27	7.21	6.79	7.45	5.37	6.95	6.90	7.79	8.41	8.40	9.09
20	8.07	8.45	6.15	6.99	7.59	6.28	6.92	6.72	7.98	8.42	8.58	9.20
25	8.61	8.41	6.24	7.32	7.84	6.54	7.33	6.77	---	8.56	8.84	9.30
EOM	8.99	8.21	6.67	6.56	7.96	6.24	7.45	7.25	8.21	8.54	8.65	9.49

WTR YR 1978 HIGH 4.76 JAN 27 LOW 9.80 OCT 7 AND OTHERS

LEHIGH COUNTY

403429075392401. Local number, LE 644.

LOCATION.--Lat 40°34'29", long 75°39'24", Hydrologic Unit 02040106, at Haafsville.
Owner: Charles J. Haaf.
AQUIFER.--Beekmantown Group of Middle Ordovician age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in (25 cm), depth 184 ft (56.1 m), cased to 63 ft (19.2 m), open hole.
DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of plywood cover, 1.45 ft (44 cm) above land-surface datum.
REMARKS.--Water-quality records for 1973-75 are available in files of district office.
PERIOD OF RECORD.--January 1971 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.05 ft (11.17 m) below land-surface datum, June 27, 1972; lowest, 93.42 ft (28.47 m) below land-surface datum, Feb. 6, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.02	64.67	51.31	42.57	38.21	---	38.09	43.19	42.66	48.04	53.87	56.47
10	69.12	60.92	49.96	41.67	39.09	---	38.48	44.05	43.56	48.98	53.48	57.28
15	68.65	57.88	49.69	41.00	40.43	---	39.46	44.15	44.63	49.81	53.66	58.31
20	65.26	57.29	47.88	40.72	41.60	---	40.28	42.53	45.56	50.74	54.24	58.51
25	64.14	57.28	42.08	41.37	43.13	41.43	41.19	42.13	46.64	51.71	55.37	58.74
EOM	64.42	55.90	41.63	37.72	43.92	37.56	41.85	42.04	47.63	52.83	56.13	59.64

WTR YR 1978 HIGH 37.40 APR 1 LOW 69.23 OCT 8

403226075343001. Local number, LE 860.

LOCATION.--Lat 40°32'26", long 75°34'30", Hydrologic Unit 02040106, at Lower Macungie Township.
Owner: Paul Knepper.
AQUIFER.--Dolomite of Allentown Formation of Upper Cambrian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 100 ft (30.5 m), cased to 58 ft (17.7 m), open hole.
DATUM.--Altitude of land-surface datum is 358 ft (109 m). Measuring point: Top of casing, 2.00 ft (61 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--June 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.26 ft (0.08 m) below land-surface datum, Jan. 27, 1978; lowest 10.46 ft (3.188 m) below land-surface datum, July 23, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	5.50	3.21	2.71	2.27	3.57	2.33	3.62	3.49	3.85	4.60	4.80
10	---	4.04	3.29	1.98	2.61	3.68	2.65	3.74	3.68	4.09	4.40	5.02
15	6.12	4.05	3.08	2.38	2.93	1.95	2.95	3.36	3.83	4.21	4.62	5.13
20	5.14	4.25	2.43	2.42	3.13	2.15	2.91	3.08	3.96	4.28	4.80	5.04
25	5.27	4.24	1.67	2.68	3.25	2.36	3.26	2.98	4.02	4.38	4.97	5.19
EOM	5.41	3.97	2.36	1.66	3.37	1.79	3.46	3.37	4.12	4.55	4.63	5.33

WTR YR 1978 HIGH .26 JAN 27 LOW 6.21 OCT 14

MONROE COUNTY

411223075234901. Local number, MO 190.

LOCATION.--Lat 41°12'23", long 75°23'49", Hydrologic Unit 02040106, at Tobyhanna State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Sandstone of Catskill Formation of Upper Devonian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 98 ft (29.9 m), cased to 59 ft (17.9 m), open hole.
DATUM.--Altitude of land-surface datum is 1,960 ft (597 m). Measuring point: Top of plywood cover, 2.57 ft (78 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.01 ft (2.14 m) below land-surface datum, May 18, 1978; lowest, 15.43 ft (4.70 m) below land-surface datum, Sept. 17, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.05	9.14	8.18	9.48	9.06	10.81	7.37	9.46	9.44	11.85	13.82	14.98
10	12.15	7.68	9.12	8.05	9.57	11.08	7.65	9.03	9.64	12.24	13.77	15.15
15	11.18	8.32	8.76	8.73	10.00	10.48	8.31	7.37	10.19	12.60	14.00	15.34
20	8.60	8.78	8.48	9.10	10.20	9.99	8.44	7.29	10.70	12.95	14.35	15.07
25	8.74	9.08	8.22	9.54	10.45	8.26	8.57	7.85	---	13.31	14.56	15.10
EOM	9.32	9.05	8.91	8.51	10.57	7.49	9.11	8.94	11.78	13.69	14.76	15.31

WTR YR 1978 HIGH 7.01 MAY 18 LOW 15.43 SEP 17

400808075210401. Local number, MG 225.

LOCATION.--Lat 40°08'08", long 75°21'04", Hydrologic Unit 02040203, at Willow and Locust Streets, Norristown. Owner: Norristown State Hospital.
AQUIFER.--Sandstone of Stockton Formation of Upper Triassic age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (30 cm), depth 300 ft (91.4 m), casing information not available.
DATUM.--Altitude of land-surface datum is 165 ft (50.3 m). Measuring point: Top of casing, 0.75 ft (23 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--September 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.96 ft (3.65 m) below land-surface datum, Jan. 27, 1978; lowest, 60.25 ft (18.364 m) below land-surface datum, Nov. 5, 6, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	26.50	17.81	16.51	15.11	19.27	15.02	19.12	16.69	---	25.22	20.56
10	---	21.69	18.09	16.03	16.09	19.74	15.78	19.28	17.35	---	21.12	20.50
15	---	21.18	17.94	15.65	17.07	17.66	16.68	18.88	18.03	---	27.61	20.39
20	---	21.31	15.42	14.82	17.84	16.50	17.17	16.89	18.56	20.19	32.25	20.66
25	---	20.74	14.35	15.48	18.53	16.41	17.83	15.97	18.96	20.49	24.33	21.01
EOM	26.26	18.99	15.57	13.66	18.74	13.93	18.39	15.93	19.63	20.11	21.40	21.39

WTR YR 1978 HIGH 11.96 JAN 27 LOW 32.54 AUG 21

MONTGOMERY COUNTY

401310075181702. Local number, MG 884.

LOCATION.--Lat 40°13'10", long 75°18'17", Hydrologic Unit 02040203, at Upper Gwyned Township, near West Point. Owner: Merck, Sharp, and Dohme, Inc.
AQUIFER.--Shale of Brunswick Formation of Upper Triassic age.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in (30 cm) to 10 in (25 cm), depth 600 ft (183 m), casing information not available.
DATUM.--Altitude of land-surface datum is 351 ft (107 m). Measuring point: Top of casing, 1.30 ft (40 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--March 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.40 ft (11.704 m) below land-surface datum, June 30, 1972; lowest, 93.17 ft (28.398 m) below land-surface datum, Oct. 20, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.46	77.60	72.91	67.29	67.15	66.84	65.70	64.93	63.66	64.34	62.49	64.57
10	79.49	77.13	72.43	67.31	66.45	67.24	65.27	65.09	63.86	63.18	62.43	64.67
15	79.33	76.46	71.79	67.39	65.55	67.34	65.20	64.86	64.19	63.19	63.20	64.72
20	78.80	75.85	70.98	67.36	65.61	67.25	64.74	69.56	64.31	63.98	64.04	64.98
25	78.21	75.10	69.81	67.40	65.95	66.88	64.66	63.94	64.48	64.37	64.53	65.27
EOM	77.83	74.04	68.27	67.09	66.19	66.07	64.63	63.60	64.67	63.94	64.84	65.92

WTR YR 1978 HIGH 61.57 AUG 7 LOW 79.49 OCT 7 AND OTHERS

NORTHAMPTON COUNTY

403618075203801. Local number, NP 85.

LOCATION.--Lat 40°36'18", long 75°20'38", Hydrologic Unit 02040106, at Bethlehem. Owner: City of Bethlehem.
AQUIFER.--Dolomite of Tomstown Formation of Lower Cambrian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 12 in (30 cm), depth 344 ft (105 m), cased to 73 ft (22.3 m), open hole.
DATUM.--Altitude of land-surface datum is 230 ft (70.1 m). Measuring point: Top of casing, 1.00 ft (30 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--July 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.33 ft (10 cm) below land-surface datum, Sep. 24, 1975; lowest measured, 3.99 ft (1.216 m) below land-surface datum, Feb. 19, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.37	APR 15	2.94	MAY 5	3.28	JUN 5	2.71	JUL 5	2.86	AUG 25	3.23
NOV 21	3.40	20	2.84	10	3.21	10	2.91	10	3.15	SEPT 5	3.29
DEC 22	1.93	25	3.14	15	2.01	15	2.98	15	3.22	10	3.36
JAN 24	3.15	30	3.25	20	2.11	20	3.07	20	3.28	15	3.45
FEB 23	3.23	--	----	25	2.14	25	3.06	25	3.25	20	2.76
MAR 23	2.21	--	----	--	----	--	----	--	----	25	3.25

WTR YR 1978 HIGH 1.91 MAY 19 LOW 3.45 SEPT 14 AND OTHERS

PHILADELPHIA COUNTY

395342075102101. Local number, PH 12.

LOCATION.--Lat 39°53'42", long 75°10'21", Hydrologic Unit 02040202, at Barracks and East Fourth Streets, Philadelphia. Owner: U.S. Naval Base.
AQUIFER.--Sand of Raritan Formation ("middle aquifer") of Upper Cretaceous age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (20 cm), depth 110 ft (34 m), cased to 94 ft (28.7 m), screened 94-104 ft (28.6-31.7 m).
DATUM.--Altitude of land-surface datum is 10.00 ft (3.05 m). Measuring point: Top of casing, 1.80 ft (55 cm) above land-surface datum.
REMARKS.--Mean daily fluctuation caused by tidal loading, 0.20 ft (6 cm).
PERIOD OF RECORD.--January 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.97 ft (4.87 m) below land-surface datum, Apr. 20, 1978 lowest, 39.60 ft (12.070 m) below land-surface datum, July 20, 1955.

WATER LEVEL. IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.74	16.92	16.70	17.26	17.11	17.17	16.45	16.56	16.37	16.72	16.94	16.64
10	17.43	16.36	17.38	17.30	16.95	16.71	16.55	16.62	16.49	16.52	16.67	16.87
15	16.98	16.65	16.95	17.36	17.11	16.78	16.87	16.28	16.55	16.47	16.77	16.62
20	17.20	17.14	16.65	16.90	17.04	17.02	15.97	16.43	16.17	16.70	16.88	16.72
25	17.21	16.50	16.59	16.93	16.86	17.05	16.55	16.37	16.30	16.82	16.82	16.77
EOM	17.17	16.91	16.88	17.22	17.16	16.73	16.26	16.19	16.48	16.86	16.69	17.06

WTR YR 1978 HIGH 15.97 APR 20 LOW 17.82 OCT 7

SCHUYLKILL COUNTY

404708076070701. Local number, SC 296.

LOCATION.--Lat 40°47'08", long 76°07'07", Hydrologic Unit 02040203, at Locust Lake State Park.
Owner: U.S. Geological Survey.
AQUIFER.--Mauch Chunk Formation of Lower Pennsylvanian age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 242 ft (73.8 m), cased to 40 ft (12.2 m), open hole.
DATUM.--Altitude of land-surface datum is 1,290 ft (393 m). Measuring point: Top of casing, 2.30 ft (70 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--July 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.16 ft (10.11 m) below land-surface datum, Mar. 28. 1978; lowest, 54.60 ft (16.642 m) below land-surface datum. Sept. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	50.61	46.73	42.43	---	44.14	51.13	40.84	48.42	44.56	48.41	51.03	51.50
10	47.59	41.47	44.32	---	46.22	51.56	44.06	48.32	45.25	49.09	50.44	51.77
15	47.44	39.79	44.41	40.45	---	44.35	46.11	---	46.15	49.52	49.84	51.98
20	41.28	43.70	41.71	44.43	---	41.20	47.16	34.29	46.83	50.00	50.40	51.18
25	41.48	46.05	---	46.79	50.31	36.64	47.35	38.16	---	50.46	50.65	50.80
EOM	45.31	46.14	---	40.14	50.64	36.15	47.71	42.03	48.08	50.92	51.03	51.15

WTR YR 1978 HIGH 33.16 MAR 28 LOW 52.05 SEP 18

WAYNE COUNTY

414333075153201. Local number, WN 64.

LOCATION.--Lat 41°43'33", long 75°15'32", Hydrologic Unit 02040103, at State Game Land Number 159.
Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Glacial Outwash of Quarternary age.
WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 52 ft (15.8 m), cased to 52 ft (15.8 m), open end.
DATUM.--Altitude of land-surface datum is 1,330 ft (405 m). Measuring point: Top of plywood cover, 2.57 ft (78 cm) above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--October 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.88 ft (2.401 m) below land-surface datum, Nov. 17, 1972; lowest, 32.33 ft (9.854 m) below land-surface datum, Oct. 7, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.87	27.87	26.31	26.80	26.42	28.29	24.56	26.56	26.76	30.44	---	31.63
10	27.40	27.33	26.65	26.47	26.87	28.38	24.17	25.43	27.10	30.72	---	31.68
15	26.81	26.37	26.63	26.22	27.45	28.28	24.75	24.83	26.82	30.89	---	31.71
20	---	26.77	26.20	26.53	27.72	27.36	25.31	23.20	28.16	31.02	---	31.61
25	26.87	27.06	25.93	---	27.98	26.11	25.40	23.66	29.49	---	31.54	31.53
EOM	27.51	26.97	26.19	26.14	28.13	24.84	25.84	25.12	30.06	---	31.65	31.62

WTR YR 1978 HIGH 23.20 MAY 20 LOW 31.76 SEP 18

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PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00683	CARBON, ORGANIC, S SPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, S SPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, S SPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, S SPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)

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PARM.      NEW TERMINOLOGY -- FIRST LINE
CODE       OLD TERMINOLOGY -- SECOND LINE
----  ---------------------------------

01021  BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021  BORON, SUSPENDED (UG/L AS B)

01022  BORON, TOTAL RECOVERABLE (UG/L AS B)
01022  BORON, TOTAL (UG/L AS B)

01023  BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023  BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)

01026  CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026  CADMIUM, SUSPENDED (UG/L AS CD)

01027  CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027  CADMIUM, TOTAL (UG/L AS CD)

01028  CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028  CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)

01029  CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029  CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)

01031  CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031  CHROMIUM, SUSPENDED (UG/L AS CR)

01034  CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034  CHROMIUM, TOTAL (UG/L AS CR)

01036  COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036  COBALT, SUSPENDED (UG/L AS CO)

01037  COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037  COBALT, TOTAL (UG/L AS CO)

01038  COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038  COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)

01041  COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041  COPPER, SUSPENDED (UG/L AS CU)

01042  COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042  COPPER, TOTAL (UG/L AS CU)

01043  COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043  COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)

01044  IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044  IRON, SUSPENDED (UG/L AS FE)

01045  IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045  IRON, TOTAL (UG/L AS FE)

01050  LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050  LEAD, SUSPENDED (UG/L AS PB)

01051  LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051  LEAD, TOTAL (UG/L AS PB)
```

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)

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PARM.      NEW TERMINOLOGY -- FIRST LINE
CODE       OLD TERMINOLOGY -- SECOND LINE
----  ----------------------------------

01093  ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093  ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)

01096  ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096  ANTIMONY, SUSPENDED (UG/L AS SB)

01101  TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101  TIN, SUSPENDED (UG/L AS SN)

01102  TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102  TIN, TOTAL (UG/L AS SN)

01105  ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105  ALUMINUM, TOTAL (UG/L AS AL)

01107  ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107  ALUMINUM, SUSPENDED (UG/L AS AL)

01108  ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108  ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)

01116  CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116  CESIUM, SUSPENDED (UG/L AS CS)

01121  GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121  GALLIUM, SUSPENDED (UG/L AS GA)

01126  GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126  GERMANIUM, SUSPENDED (UG/L AS GE)

01131  LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131  LITHIUM, SUSPENDED (UG/L AS LI)

01132  LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132  LITHIUM, TOTAL (UG/L AS LI)

01136  RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136  RUBIDIUM, SUSPENDED (UG/L AS RB)

01146  SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146  SELENIUM, SUSPENDED (UG/L AS SE)

01151  TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151  TITANIUM, SUSPENDED (UG/L AS TI)

01161  ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161  ZIRCONIUM, SUSPENDED (UG/L AS ZR)

01170  IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170  IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)

01505  ALPHA, SUSPENDED TOTAL (PCI/L)
01505  ALPHA, SUSPENDED (PCI/L)

01506  ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506  ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
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PARM.      NEW TERMINOLOGY -- FIRST LINE
CODE       OLD TERMINOLOGY -- SECOND LINE
-----  ------------------------------------

01516  GROSS ALPHA RADIOA-TIVITY, SUSPENDED TOTAL
         (PCI/L AS U NATURAL)
01516  GROSS ALPHA RADIOA-TIVITY, SUSPENDED
         (PCI/L AS U NATURAL)

01517  GROSS ALPHA RADIOA-TIVITY, SUSPENDED TOTAL
         (PCI/G AS U NATURAL)
01517  GROSS ALPHA RADIOA TIVITY, SUSPENDED
         (PCI/G AS U NATURAL)

01518  GROSS ALPHA RADIOA-TIVITY, SUSPENDED TOTAL
         (UG/G AS U NATURAL)
01518  GROSS ALPHA RADIOA-TIVITY, SUSPENDED
         (UG/G AS U NATURAL)

03505  BETA, SUSPENDED TOTAL (PCI/L)
03505  BETA, SUSPENDED (PCI/L)

03506  BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506  BETA, SUSPENDED, COUNTING ERROR (PCI/L)

03516  GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL
         (PCI/L AS CS-137)
03516  GROSS BETA RADIOACTIVITY, SUSPENDED
         (PCI/L AS CS-137)

03517  GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL
         (PCI/G AS SR/YT-90)
03517  GROSS BETA RADIOACTIVITY, SUSPENDED
         (PCI/G AS SR/YT-90)

03518  GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL
         (PCI/G AS CS-137)
03518  GROSS BETA RADIOACTIVITY, SUSPENDED
         (PCI/G AS CS-137)

07010  TRITIUM, SUSPENDED TOTAL (PCI/L)
07010  TRITIUM, SUSPENDED (PCI/L)

07011  TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011  TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)

07014  TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014  TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)

07016  TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016  TRITIUM, SUSPENDED (TRITIUM UNITS)

07052  CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052  CALCIUM 45, SUSPENDED (PCI/L)

07053  CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053  CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)

07062  IRON 59, SUSPENDED TOTAL (PCI/L)
07062  IRON 59, SUSPENDED (PCI/L)
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PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)

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PARM.      NEW TERMINOLOGY -- FIRST LINE
CODE       OLD TERMINOLOGY -- SECOND LINE
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39733  2,4-D, SUSPENDED TOTAL (UG/L)
39733  2,4-D, SUSPENDED (UG/L)

39743  2,4,5-T, SUSPENDED TOTAL (UG/L)
39743  2,4,5-T, SUSPENDED (UG/L)

39757  MIREX, SUSPENDED TOTAL (UG/L)
39757  MIREX, SUSPENDED (UG/L)

39763  SILVEX, SUSPENDED TOTAL (UG/L)
39763  SILVEX, SUSPENDED (UG/L)

70299  SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299  SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)

71895  MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895  MERCURY, SUSPENDED (UG/L AS HG)

71900  MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900  MERCURY, TOTAL (UG/L AS HG)

71921  MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921  MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)

80040  GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL
         (UG/L AS U NATURAL)
80040  GROSS ALPHA RADIOACTIVITY, SUSPENDED
         (UG/L AS U NATURAL)

80060  GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL
         (PCI/L AS SR/YT-90)
80060  GROSS BETA RADIOACTIVITY, SUSPENDED
         (PCI/L AS SR/YT-90)
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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons